SONY

3-856-758-12(1)

Home Entertainment Audio System

Operating Instructions

SA-VA100

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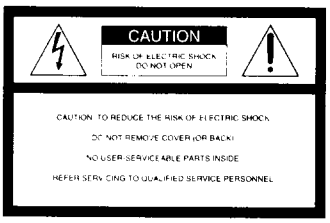
WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

You are cautioned that any changes or modification not expressly approved in this manual could void your authority to operate this equipment.

Note to CATV system installer

This reminder is provided to call CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Owner's record

The model and serial numbers are located on the rear of the unit. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. SA-VA100
Serial No. _____

Welcome!

Thank you for purchasing a Sony Home Entertainment Audio System.
Before operating the unit, please read this manual thoroughly and retain it for future reference.

About This Manual

This system can be controlled from the controls on the right speaker, from the remote control, in addition to the on screen display (OSD).
The instructions "Basic Operations" describe operations using the controls on the right front speaker and remote. The other chapters, describe operations using the on-screen display, but also provide instructions for using the remote or controls on the right front speaker when applicable.

Indicates hints and tips for making the task easier.

This system incorporates Dolby Pro Logic Surround.*

* Manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby," the double-D symbol ◻◻ and "Pro Logic" are trademarks of Dolby Laboratories Licensing Corporation.

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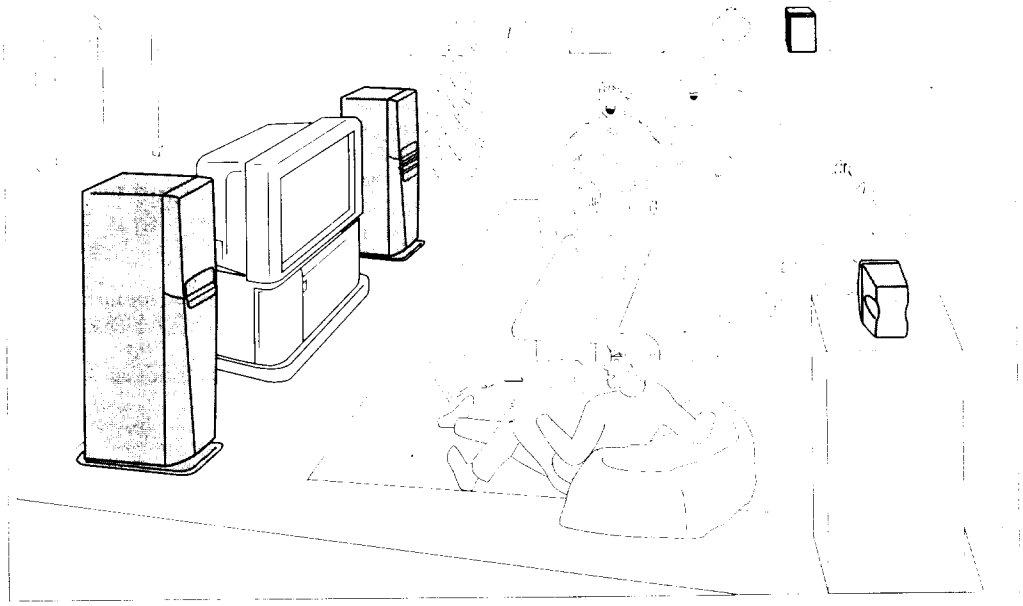


The SA-VA100 is a complete home entertainment audio system incorporating a unique interface, a seven-disc CD changer, FM / AM tuner, cassette deck, Dolby Pro Logic decoder, and super woofer speakers for full enjoyment of both home theater and audio applications. In addition, you don't have to connect a center speaker to optimize the surround effects. Easy operation via the supplied remote ensures maximum enjoyment of the home-theater sound this system provides.

Four different types of surround sound accommodate a variety of program sources

For details, see pages 14-15 and 26-30.

Dolby Surround (Pro Logic) mode
Lets you enjoy superb theater-like presence and surround effects in your home when playing back video software encoded with the Dolby Surround system.

THEATER surround mode
Creates a theater-like environment in your living room by adding the acoustic reflections of a theater to decoded Dolby Surround signals.

HALL surround mode
Reproduce the acoustics of a rectangular concert hall. Ideal for soft, acoustic sounds, or giving an extra punch to debates and press conferences.

SIMULATED surround mode
Creates simulated stereo surround effects from monaural sound sources, like old movies or monaural TV shows.

Fully efficient and well equipped internal audio system

7-CD changer

Various play modes, like shuffle play and program play, let you enjoy extended periods of your favorite music without interruptions. For details, see pages 16-17 and 31-40.

FM/AM Tuner

Simplified tuning with the on-screen station preset function. You can store, assign names to, and recall up to 30 of your favorite stations at random from the on-screen display. For details, see pages 18-19 and 41-45.

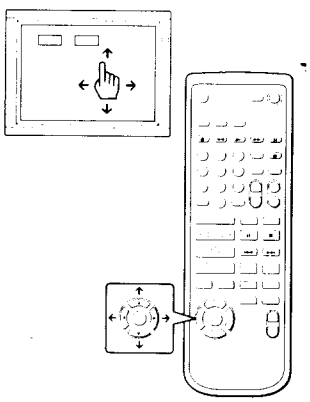
Cassette deck

Two types of Dolby Noise Reduction (B and C) reduce tape noise to provide clearer sound during playback. On-screen operations provide a convenient way to dub from CD to cassette. For details, see pages 20-21 and 46-57.

On-screen operation

When you connect this audio system to your TV, an On-Screen Display (OSD) appears and lets you operate the CD player, cassette deck, FM/AM tuner, and home theater sound modes*. Use the remote to move the pointer (hand-shaped icon) on the on-screen display and select functions. For details, see page 25.

* Even if you turn off your TV, you can still perform basic operations using the controls on the front panel or remote.

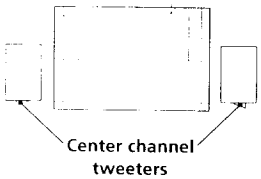


Built-in center speakers let you enjoy Dolby Pro Logic Surround sound

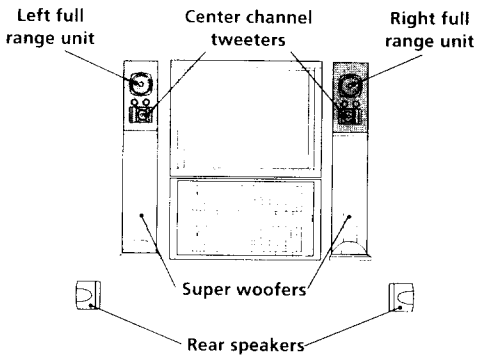
The use of a center speaker is a key factor in obtaining a full surround effect when playing sources encoded with the Dolby Pro Logic Surround sound system. Center speakers in a movie theater make central sounds, such as dialogue, clearer and create a unified sound image.

Normally, you have to install a center speaker separately, but this system makes it easy to set up a high-performance home theater system by incorporating a high-quality center system into the front speakers.

Top view



Front view

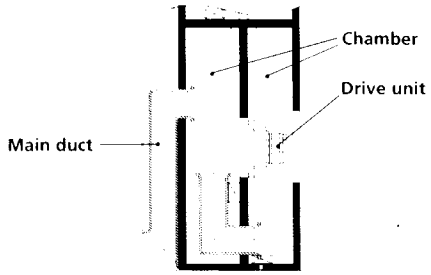


How the center speaker works

The front left and right speakers are equipped with center channel tweeters (see above) angled inwards at 15° to reproduce high-frequency center channel sounds. Low frequency center channel sounds are mixed with the front channel signals and reproduced through the front left and right full range units. This design produces a high-quality centralized sound image for the center channel which exactly matches the quality of the front channel sound to provide superior sound quality and a unified sound image without a cumbersome external center speaker.

Dynamic Bass Roar (DBR) super woofer system provides theater-like bass sound

To provide a theater-like experience complete with dynamic bass sounds, this system incorporates the Super Acoustically-loaded Woofer (SAW) design (see below) in the left and right front speakers to form a DBR super woofer system.



What is the SAW design?

The SAW design features a centrally-positioned woofer drive unit, two chamber construction, and a long main duct. Through precision control of the acoustics of the two chambers, the unit can reproduce powerful ultra low frequencies without muddiness.

In addition, we also included two super woofer modes designed to bring the dynamic bass sounds found in movie theaters (mode 1) and concert halls (mode 2) to your living room.

Power turns off and on automatically when the FUNCTION is set to VIDEO 1 or VIDEO 2

When the speakers are turned on and the FUNCTION is set to VIDEO 1 or VIDEO 2, the power turns off automatically (and the READY indicator on the left speaker turns red) three minutes after the program ends and the sound signal goes out.
The speakers turn themselves back on the next time you start playback from a source connected to VIDEO 1 or VIDEO 2. Therefore, you don't have to bother using the power switch every time you use the speakers with a video source.

Precautions

On safety

- Should any solid object or liquid fall into the cabinet, unplug the system and have it checked by qualified personnel before operating it any further.

Caution

The use of optical instruments with this product will increase eye hazard.

On power sources

- Before operating the speakers, check that the operating voltage is identical with your local power supply. The operating voltage is indicated on the nameplate on the rear of the speakers.
- The speakers are not disconnected from the AC power source as long as they are connected to the wall outlet, even if the speakers themselves have been turned off.
- If you are not going to use the speakers for an extremely long time, be sure to disconnect the speakers from the wall outlet. To disconnect the AC power cord, grasp the plug itself; never pull the cord.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Should the AC power cord need to be changed, have it done at a qualified service shop only.

On placement

- Do not place the speakers near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Good ventilation is essential to prevent internal heat buildup. Place the speakers in a location with adequate air circulation, and in a way that does not block the rear ventilation holes.

On cleaning

- Clean the cabinet, panel and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

For the customers in the USA

For detailed safety precautions, see the "IMPORTANT SAFEGUARDS" leaflet.

If you have any question or problem concerning your speakers, please consult your nearest Sony dealer.

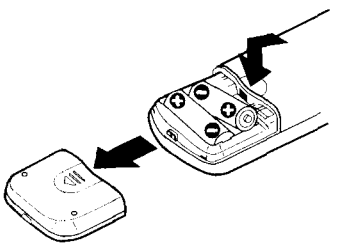
Unpacking

Check that you received the following items with your system:

- Front L / R speaker connecting cord, 3.5 m (1)
- Audio cord, 3 m (1)
- Video cord, 2 m (1)
- Rear speaker SS-SR151 (2)
- Rear speaker connecting cord, 10 m (2)
- FM wire antenna (1)
- AM loop antenna (1)
- Remote commander (remote) RM-U100AV (1)
- Sony SUM-3 (NS) batteries (2)
- Speaker stand (2)
- Screw (12)

Inserting batteries into the remote

Insert two size AA (R6) batteries with the + and – on the battery compartment. When using the remote, point it at the remote sensor ▣ on the right front speaker.



When to replace batteries

Under normal use, the batteries should last for about 6 months. When the remote no longer operates the speakers, replace both batteries with new ones.

Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not use a new battery with an old one.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you don't use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

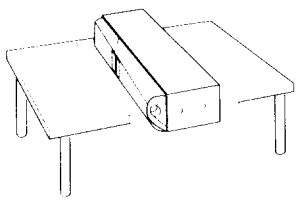
Installing the Speaker Stands

Be sure to install the supplied speaker stands before you use the speakers.

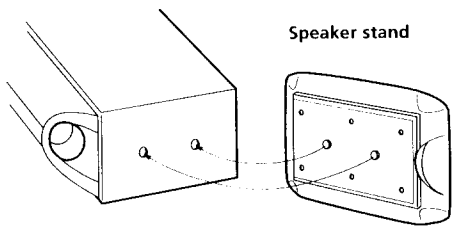
Notes

- Be careful! The left and right speakers weigh nearly 23 kg (50 lbs) apiece and are extremely heavy.
- Although the speakers are wrapped in protective material, take care not to grab the grill net when removing the speakers from their cartons. This may damage the grill net.

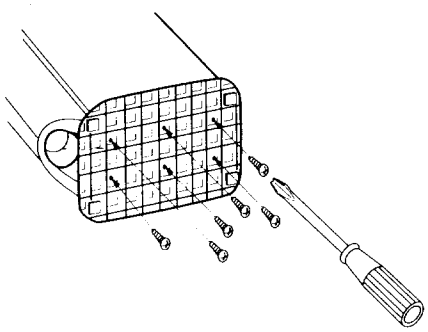
1 Spread a towel, or other soft cloth, over a table and lay the speakers down.



2 Align the pins on the stands with the holes on the bottom of the speakers.



3 Use a screw driver to fasten the stands to the bottom of the speakers with the supplied wood screws (6 for each speaker).

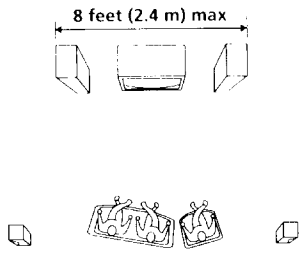


4 Make sure the stands are securely attached and stand the speaker upright.

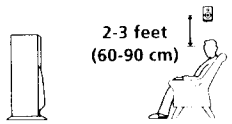
Choosing the Best Location

To obtain high sound quality and a proper sound image from the front speakers, place the speaker with the built CD player and cassette deck to the right of your TV and the other to the left of your TV so that the center channel tweeters angle towards the center of the room.

For the best central sound image, place the left and right speakers within 8 feet of each other and equidistant from the TV.

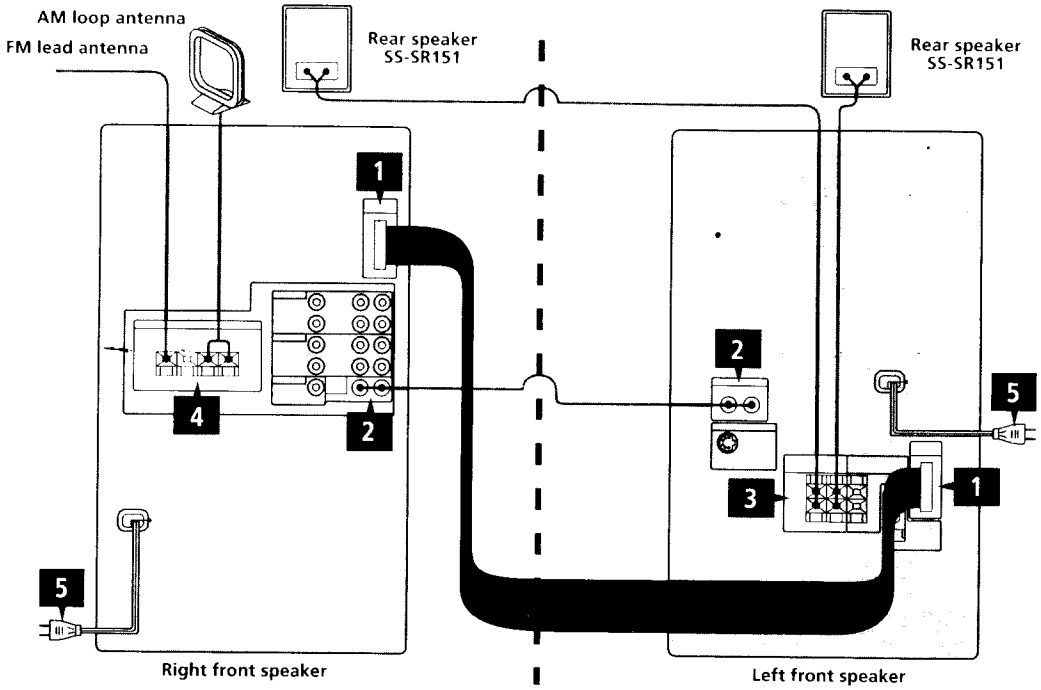


Place the rear speakers so that they fire directly across at each other about 2 to 3 feet above your listening position.



Speaker and System Hookups

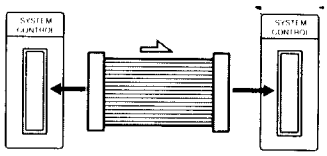
This section describes how to connect the system.



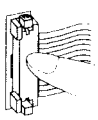
The arrow ⇨ indicates signal flow.

1 Connect the supplied flat cord to the SYSTEM CONTROL CONNECTOR connectors so that it clicks in place

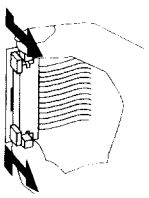
Right front speaker Left front speaker



To connect, depress the middle of the male connector until it clicks into the female connector.



To disconnect, pull the connector out. Never pull the cord itself.



Note

Be sure to disconnect the AC power cord before disconnecting or connecting the connector.

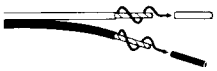
2 Connect the supplied audio cord from the LINE OUT jacks on the right front speaker to the LINE IN jacks on the left front speaker.

Right front speaker Left front speaker

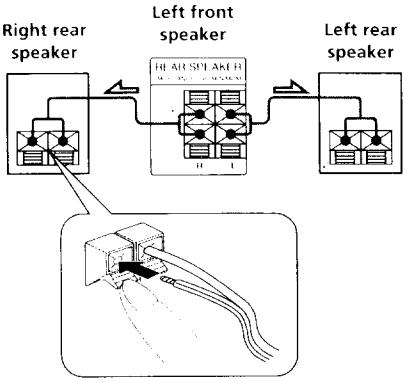
(continued)

3 Use the supplied speakers cord to connect the left and right rear speakers.

1 Twist the speaker cord coating and strip it from the end of the cords.



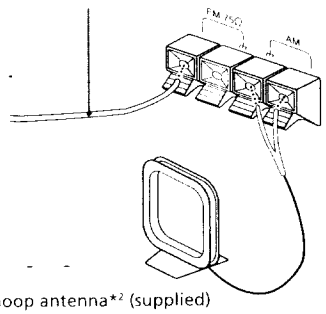
2 Insert the stripped wire into speaker terminals.



Be sure to connect matching speaker terminals (e.g. use the striped wire to connect + to +, and use the solid wire to connect – to –). If the connections are reversed (+ to –), the sound will be distorted and lack bass.

4 Connect the FM and AM antenna.

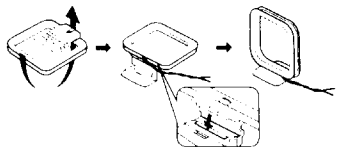
FM lead antenna*1 (supplied)



AM loop antenna*2 (supplied)

*1 Note: Extend horizontally and affix in the position with optimum reception.
*2 Note: Orient toward the direction with optimum reception.

Assemble the supplied AM loop antenna as shown below.



Note

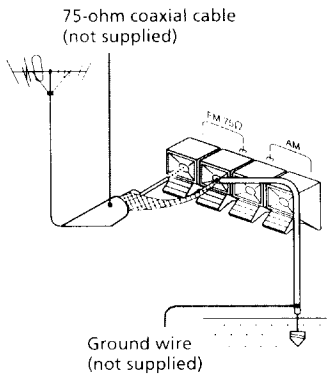
To prevent noise pick-up, keep the AM loop antenna away from the unit and TV set.

To improve the FM reception

Connect an external FM antenna to the FM 75 Ω and ⏚ terminals, using a 75-ohm coaxial cable.

Important

Ground the external antenna from ⏚ terminal against lightning with the screw clamp. To prevent a gas explosion, do not connect the ground wire to a gas pipe.



To improve the AM reception

We recommend that you purchase and connect the optional Sony antenna to the unit if reception is weakened by ferroconcrete used in the construction of your apartment or building.

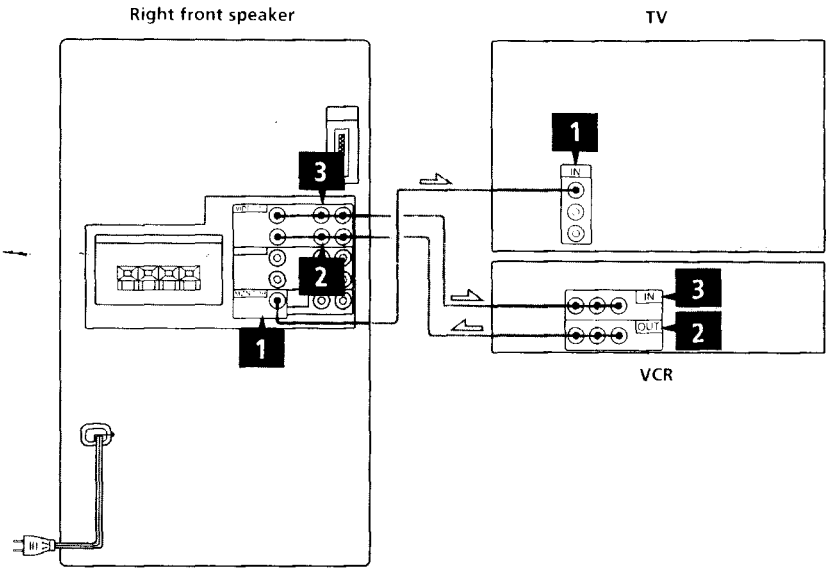
5 Connect the AC power cords from the left and right speakers to wall outlets.

About the WIRELESS OUT jack

This jack lets you connect the forthcoming Sony Wireless Speaker System. You can use the Wireless Speaker System in place of the supplied rear speakers. **This jack is for use with the Sony Wireless Speaker System only.** Connecting other equipment to this jack may damage this unit and the connected equipment.

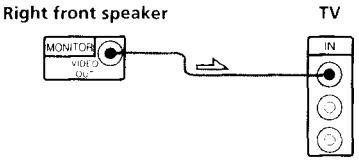
A/V Hookups

This section describes how to connect the system and how to connect your TV or VCR to the speakers.
For the best possible sound and fully integrated on-screen operations, connect the system directly to your VCR.
The following connections suppress noise from the TV and let you enjoy high quality sound.

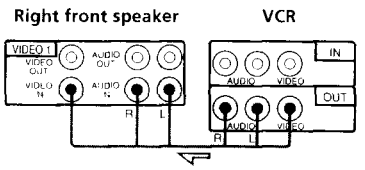


The arrow ⇨ indicates signal flow.

1 Connect the supplied video cord from the MONITOR (VIDEO OUT) jack on the right front speaker to the video input jack on your TV.

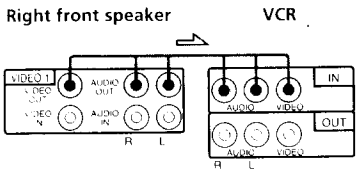


2 Connect an audio/video cord (not supplied) from the VIDEO 1 (AUDIO IN/VIDEO IN) jacks on the right front speaker to the line out jacks on your video component (VCR).
If you have an additional video component (VCR or LD player), connect it to the VIDEO 2 (AUDIO IN/VIDEO IN) jacks.
Be sure to match the color of the plugs and the jacks.



(continued)

3 Make this connection if you want to record from the CD player, FM/AM tuner or tape deck, or an additional video components.
Connect an audio/video cord (not supplied) from the VIDEO 1 (AUDIO OUT/VIDEO OUT) jacks on the right front speaker to the line in jacks on your video component (VCR).
If you connected an additional video component (VCR) to the VIDEO 2 (AUDIO IN/VIDEO IN) jacks, you may also want to make connections to the VIDEO 2 (AUDIO OUT/VIDEO OUT) jacks.
Be sure to match the color of the plugs and the jacks.

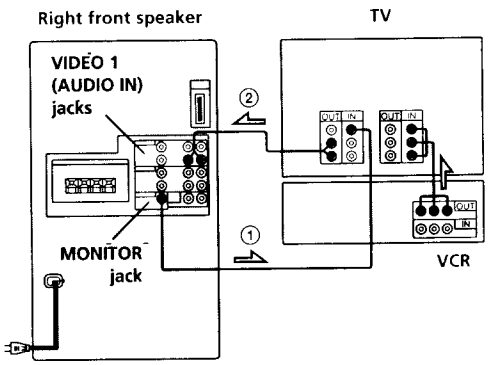


Quick connections (For customers with TVs with stereo audio out jacks)

If the audio and video output terminals on your TV and VCR are already connected, and your TV has stereo AUDIO OUT jacks, you can start enjoying surround sound simply by connecting the system to your TV as shown below.

Important

- Set the volume on your TV to MIN (minimum).
- If your TV has an ON/OFF switch for its internal speaker, set it to OFF and enjoy the sound from this system.



The arrow ⟹ indicates signal flow.

① Connect the supplied video cord from the MONITOR (VIDEO OUT) jack on the right front speaker to the video input jack on your TV.

② Connect an audio cord (not supplied) from the VIDEO 1 (AUDIO IN) jacks on the right front speaker to the line out jacks on your TV.

Notes

- Do not connect the speakers to the TV output jacks corresponding to the same function as the TV input jacks connected to the VCR (in other words, if the VCR is connected to the TV's VIDEO 1 IN jacks, do not connect the speakers to the TV's VIDEO 1 OUT jacks).
- Be sure to match the color of the plugs and the jacks.

If you use AUDIO OUT jacks marked VARIABLE

After making the connection as shown above, turn up the volume on the TV. Use this speaker system's volume control for regular volume adjustment. Turning down the volume on the TV reduces the AUDIO OUT signal level and may cause a loss in sound quality and/or the auto-power off function (see page 27) to function.

To view the on-screen display on your TV

The following procedure applies to both standard and "quick" connections.

1 Turn on your TV and set its input selector to the correct video input (the video input which you connected to this system's MONITOR (VIDEO OUT) jack).

2 Press POWER on this unit's remote to turn on the system.

3 Press OSD ON/OFF on the remote control to turn on the on-screen display.

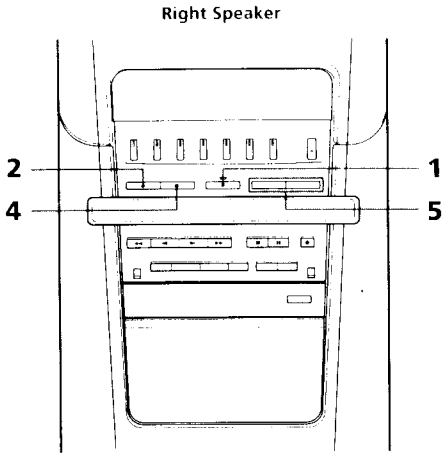
Note

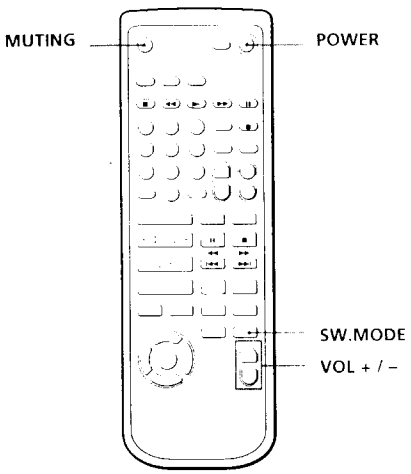
With the quick connections, you cannot display the on-screen display while watching video components connected to the other inputs on your TV.

Enjoying Surround Sound

You can take advantage of surround sound simply by selecting one of the pre-programed sound fields according to the type of program you want to play.

To obtain the best possible sound we recommend equalizing the speaker levels of the DOLBY SUR and THEATER sound modes before you begin (see "Adjusting the Speaker Output Levels" on page 27).





For other sound adjustments, see pages 26 and 28-29.

This system is provided with four different surround modes:

DOLBY SUR (Dolby Pro Logic Surround) mode
Reproduces superb theater-like presence and surround effects from video software encoded with Dolby Surround.

THEATER mode
Creates a theater-like environment in your living room by adding the acoustic reflections of a theater to decoded Dolby Surround signals.

HALL mode
Reproduce the acoustics of a rectangular concert hall. Ideal for soft, acoustic sounds, or for giving an extra punch to debates and press conferences.

SIMULATED mode
Creates simulated stereo sound effects from monaural sound sources, like old movies or TV shows.

1 Press SYSTEM POWER (or POWER on the remote) to turn on the system.

2 Press FUNCTION repeatedly to select the program source you desire (VIDEO 1, VIDEO 2, TAPE, CD, or TUNER).

For example, if you connected your VCR to the VIDEO 1 IN jacks, select VIDEO 1.

3 Start playback from the program source.

To listen without surround effects

Press SURROUND repeatedly until SUR OFF is displayed.

Note

Some videos and laser discs may use Dolby Surround sound even if it's not indicated on the package.

4 Press SURROUND repeatedly to select the sound field you desire.

Program	DOLBY SUR	THEATER	HALL	SIMULATED	OFF
Recent movies	●	●			
Concerts	●	●	●		
Music		●	●		
Sports			●		
Old Movies				●	
Video games			●	●	
Monaural TV programs				●	
Education, News					●

5 Press MASTER VOLUME + or – (or VOL + or – on the remote) to adjust the volume.

To select a suitable SUPER WOOFER mode

Press SW.MODE on the remote repeatedly to select SUPER WOOFER MODE 1 or 2.

SUPER WOOFER MODE 1 provides powerful bass sound ideal for movies. SUPER WOOFER MODE 2 is a more subtle effect designed for music.

To mute the sound

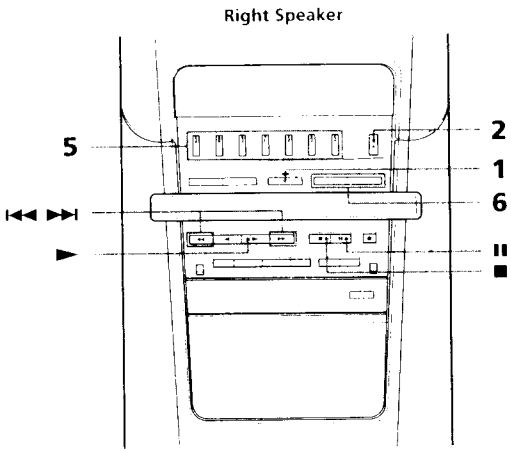
Press MUTING on the remote.

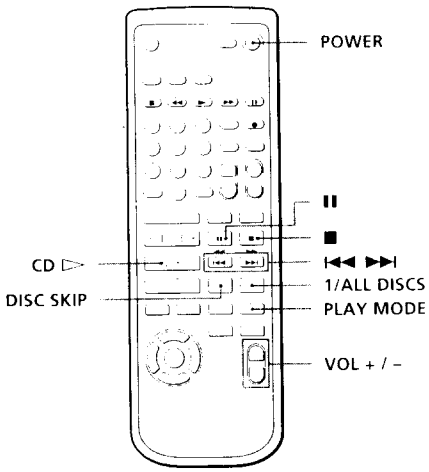
"MUTING" appears in the display on the right speaker.

Press again to restore the sound.

Playing a CD (normal play)

You can play CDs in four modes: normal, shuffle, program and repeat. The mode decides which tracks (songs) you will listen to, which order you will listen in, and whether or not they will repeat.
You can control the unit from the on screen display using the supplied remote.
Before you play a CD, decrease the sound level by pressing MASTER VOLUME to avoid damaging the speakers.
After loading up to seven CDs, you can play all tracks or discs in the original order consecutively (normal play).





If "PROGRAM" or "SHUFFLE" appear in the display after step 1, press PLAY MODE on the remote repeatedly until they disappear.

1 Press SYSTEM POWER (or POWER on the remote) to turn on the system.

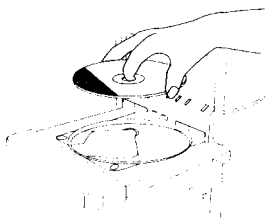
2 Press OPEN/CLOSE to open the disc tray.

If the tray contains a CD, press DISC SKIP on the remote to open the next tray.

3 Holding the CD by the edge, place the CD on the CD tray with the label side up.

Note

You cannot play 8-cm CDs, even with an adaptor.



4 Press DISC SKIP on the remote to insert CDs sequentially.

The current tray closes and the next tray opens.

5 Press DISC 1 ~ 7 to choose the disc you want to play.

The disc tray closes automatically and play starts. If you press ▷ (or CD ▷ on the remote), play starts from the beginning of the selected CD (the CD whose disc indicator is green).

6 Press MASTER VOLUME + or – (or VOL + or – on the remote) to adjust the volume.

Automatic Source Selection

If you press CD ▷ on the remote while you are listening to other sound source, the CD player is selected and play starts from the CD whose disc indicator is green.

Note

If there is no CD in the player, "CD NO DISC" appears in the display. Press DISC 1~7 (or CD ▷ on the remote) while the indication is on, and the disc tray will open automatically.

To	Press (on remote)
Stop play	STOP ■ (■)
Pause	PAUSE ❚❚ (❚❚)
Resume play after pause	► (CD ▷) or PAUSE ❚❚ (❚❚)
Go forward to another track	▶▶ (▶▶❙)
Go backward to another track	◀◀ (❙◀◀)
Locate a specific part in a track	Press and hold down ▶▶ or ◀◀
Search quickly by observing the display during pause	Press and hold down ▶▶ or ◀◀ until you find the desired point. You will not hear the sound during this operation.
Select a particular disc	DISC 1~7* (press DISC SKIP repeatedly)
Remove the current disc	⏏ OPEN/CLOSE

* If no disc is loaded at that number, the tray will emerge.

To select the CDs to be played

To play	Press 1/ALL DISCS so that
Only the current CD	"1 DISC" appears
All the CDs in all the trays	"ALL DISCS" appears

What the indicators on DISC 1 ~ 7 indicate

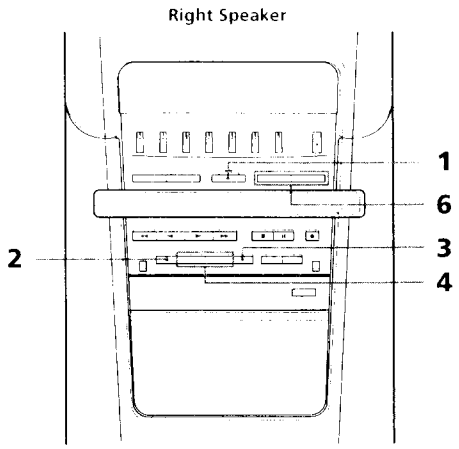
The indicators on DISC 1 ~ 7 change colors to indicate the status of the respective disc tray.

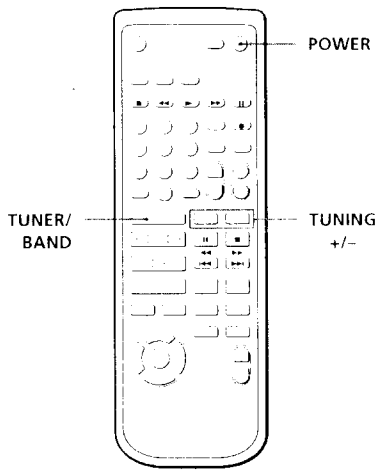
- A green indicator shows that the tray is selected (either during playback or standby, or when the tray is open) no matter if there is a CD inside or not.
- An orange indicator shows that there is a CD in the disc tray but the tray is not currently selected.
- No indicator shows that the tray is empty.

Listening to the Radio

When you want to play a radio program, you can have the tuner automatically scan the radio frequencies and tune in the stations with clear signals. This feature saves you time in searching for stations with clear signals. However, stations with weak signals may be skipped by automatic tuning. Manually tune in the ones skipped by automatic tuning.

To prevent noise pick-up, keep the AM loop antenna away from the unit and TV set.
If the noise is not reduced, turning off your TV may improve reception.

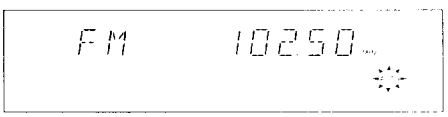




1 Press SYSTEM POWER to turn on the system.

2 Open the cover on the front panel and press BAND repeatedly to select FM or AM.

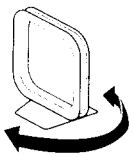
3 Press TUNING MODE repeatedly until "AUTO" appears in the display.



Once you have preset stations
You can select "PRESET" in step 3 for preset tuning (see page 44).

To improve AM broadcast reception

Reorient the supplied AM loop antenna.

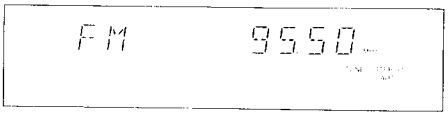


4 Press TUNING + to scan for higher frequency stations. To scan for lower frequency stations, press TUNING –.

The tuner starts scanning radio frequencies, and stops automatically when it finds a clear station.

"TUNED" appears in the display.

"STEREO" also appears if the tuned FM station is broadcasting in stereo.



5 If you do not want to listen to the selected station, press TUNING + or – again to restart the scan.

6 Press MASTER VOLUME + or – to adjust the volume.

Automatic Source Selection

If you press BAND (or TUNER/BAND on the remote) while you are listening to other sound source, the tuner is selected and the last received station plays automatically.

When the desired station is not tuned in

Automatic tuning may skip stations with a weak signals.
Tune in the station manually.

1 Press TUNING MODE repeatedly until "MANUAL" appears in the display.
2 Press TUNING + or – repeatedly until the desired station is tuned in.

To change the AM tuning interval

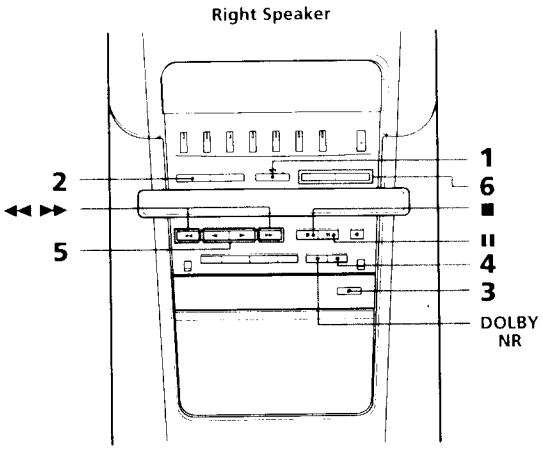
The AM tuning interval is preset to 10 kHz in the factory. If you need to change the interval to 9 kHz, do as follows:

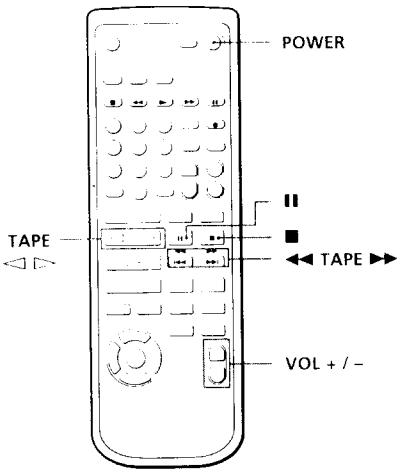
1 Turn on the power.
2 Change the band to AM.
3 Turn off the power.
4 Turn the power back on while pressing SYSTEM POWER and TUNING + on the unit.

After changing the AM tuning interval, reset the preset radio stations. To reset the interval to the factory setting, follow the same procedure.

Playing a Tape

You can use TYPE I (normal), TYPE II (CrO_2) and TYPE IV (metal) tapes. When you insert a tape, the deck detects the tape type automatically.



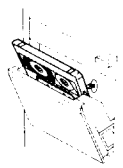


1 Press SYSTEM POWER (or POWER on the remote) to turn on the system.

2 Press FUNCTION repeatedly to select "TAPE".

3 Press EJECT ⏏ to open the tape compartment.

Insert a recorded tape in with the tape side down and the side you want to play facing forward. Push to close the compartment. The tape will start playing from the front side.



4 Press DIRECTION repeatedly to select single or dual-sided playback.

To play	Press DIRECTION to select
One side of the tape	⇀
Each side once	⇁
Both sides repeatedly*	⇄

* The deck stops automatically after repeating the sequence five times.

5 Press ► (to play the front side) or ◄ (to play the reverse side).

The tape starts playing.

6 Press MASTER VOLUME + or – to adjust the volume.

When listening to a tape recorded with the Dolby* B or C type noise reduction

Press DOLBY NR so that "DOLBY NR B" or "DOLBY NR C" appears in the display according to the noise reduction system used in recording.

The Dolby noise reduction system reduces tape hiss noise in low-level high-frequency signals.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

Automatic Source Selection

If you press TAPE ◁ ▷ on the remote while you are listening to other sound source and the tape deck is in stop mode, the tape deck is selected and play starts automatically.

When "NO TAPE" is displayed

There is no tape loaded in the cassette holder.

To	Press (on remote)
Stop play	■ (■)
Pause	❚❚ PAUSE (❚❚)
Resume play after pause	❚❚ PAUSE (❚❚), ◄ or ►
Fast forward	►► (TAPE ►►) for front side ◄◄ (TAPE ◄◄) for reverse side
Rewind	◄◄ (TAPE ◄◄) for front side ►► (TAPE ►►) for reverse side
Remove the cassette	EJECT ⏏

To find the beginning of a track (AMS)

Using the AMS (Automatic Music Sensor) feature, you can quickly find the track you're looking for. The deck senses where a music track begins by detecting a blank space of more than four seconds between tracks.

If the side of the cassette being played is the	To play the next track press (on remote)	To play the current track press (on remote)
Front side (►)	►► (TAPE ►►)	◄◄ (TAPE ◄◄)
Reverse side (◄)	◄◄ (TAPE ◄◄)	►► (TAPE ►►)

Note

The AMS function may not work correctly if:

- the blank space between tracks is less than 4 seconds long.
- the signal strength of the left and right channels are very different.
- there is a passage of low frequencies or a very low volume within a track.

To play automatically after fast winding (auto play)

Use the controls on the speaker for this operation. The controls on the remote cannot be used.

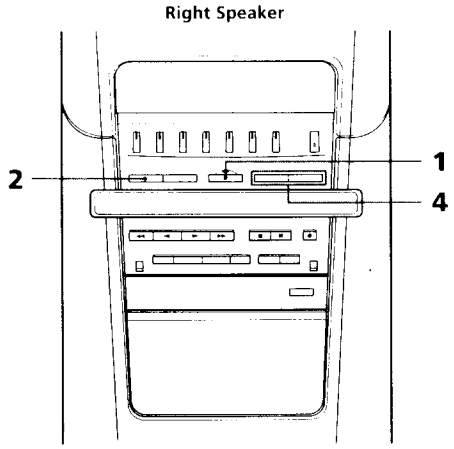
To start playing from the beginning of the front side, press ► while holding down ◄◄.

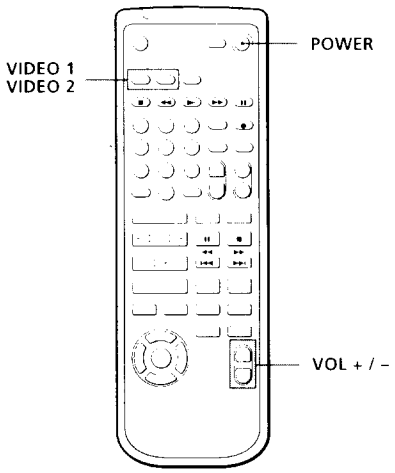
To start playing from the beginning of the reverse side, press ◄ while holding down ►►.

Selecting a Video Source

When you watch TV or video programs, we recommend you play audio portion through this system instead of the speaker on your TV. This lets you take advantage of the system's surround sound effects, like Dolby Surround, and lets you use the system's remote to control the audio.

Before you start, set your TV's volume control to minimum or turn off your TV's speaker(s) so you can enjoy the surround sound from your system.





1 Press SYSTEM POWER (or POWER on the remote) to turn on the system.

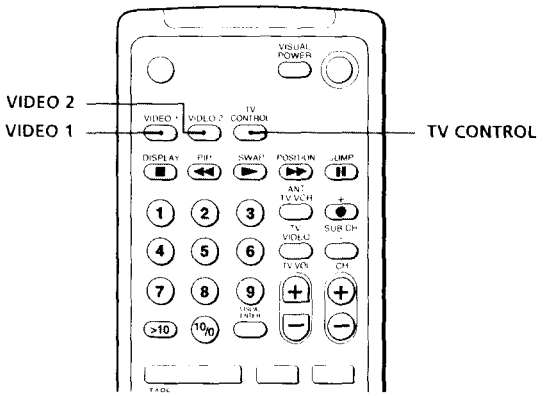
2 Press FUNCTION repeatedly to select "VIDEO 1" or "VIDEO 2"(or press VIDEO 1 or VIDEO 2 on the remote).

3 Turn on the respective component, then start playing (see the operating instructions supplied with the respective component for details).

4 Press MASTER VOLUME + or – (or VOL + or – on the remote) to adjust the volume.

Operating Sony TVs and Video Components

You can use the shaded buttons shown below to Operate Sony TVs and video components.



With the factory settings, VIDEO 1 lets you control a Sony VHS video deck and VIDEO 2 lets you control a Sony 8 mm video deck.

To control a	Press
Sony TV	TV CONTROL, then press the button(s) for the operation you desire.
Sony VHS video deck	VIDEO 1, then press the button(s) for the operation you desire.
Sony 8 mm video deck	VIDEO 2, then press the button(s) for the operation you desire.

To turn a Sony video deck on or off

1 Press VIDEO 1 or VIDEO 2 to select the component you want to turn on or off.
2 Press VISUAL POWER.

To turn a Sony TV on or off

1 Press TV CONTROL.
2 Press VISUAL POWER.

To switch the input on a Sony TV

1 Press TV CONTROL.
2 Press TV/VIDEO.

To record on a Sony video deck using this remote

1 Press VIDEO 1 or VIDEO 2 to select the video deck.
2 Press ► and ● at the same time.

(continued)

If you use Sony video components

The system automatically switches to the appropriate video input when you press VIDEO 1 or VIDEO 2 on the remote.

Watching TV without the audio system (for Sony TVs only)

Press TV CONTROL to set the remote to operate TV functions only.
See "Description of other buttons on the remote" on page 24 for available functions.

If the factory settings of the VIDEO 1 and VIDEO 2 buttons don't match your system components, you can change them.

For example, if you connect a Sony Beta video deck to the VIDEO 2 jacks, you can assign the VIDEO 2 button to set the remote to control the Beta VCR.

1 Hold down the button whose function you want to change (VIDEO 2 for example).
2 Press the numeric button corresponding to the component you want to assign to that button (1 - VTR 1 (Beta VCR), for example).

Numeric button	Selects
1	VTR 1 (Beta VCR)
2	VTR 2 (8 mm VCR)
3	VTR 3 (VHS VCR)

If your Sony VCR has a COMMAND MODE selector

Press the numeric button corresponding to the VCR's COMMAND MODE selector (for example, press "1" if the COMMAND MODE selector is set to "VTR 1").

Now you can use the VIDEO 2 button to control your Sony Beta VCR.
To reset the setting to the factory setting, repeat the above procedure.

Description of other buttons on the remote

In addition to those described above, the following buttons can also be used to control Sony TVs and VCRs.

Remote button	Operates	Function
DISPLAY	TV	Displays the TV's on-screen display information.
P IN P	TV	Activates the picture-in-picture function.*
SWAP	TV	Swaps the small and the large picture.*
POSITION	TV	Changes the position of the small picture.*
JUMP	TV	Jumps back and forth between the previous and current channels.
SUB CH + / –	TV	Selects preset channels for the small picture.*
ANT TV / VTR	VCR	Selects output signal from the antenna terminal: TV signal or VCR program.
TV VOL + / –	TV	Adjusts the volume on the TV.
CH + / –	TV / VCR	Selects preset channels.
VISUAL ENTER	TV / VCR	Changes channels when used with 1-10/0 and >10.

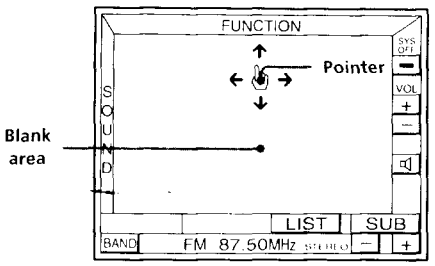
* Only for Sony TVs with the picture-in-picture function.

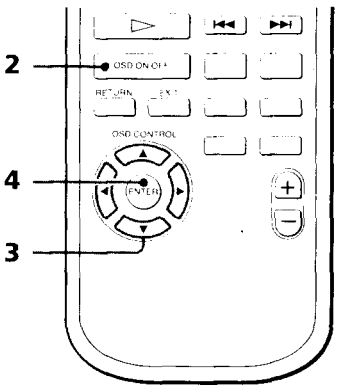
Note

Some Sony equipment cannot be controlled by this remote as shown in the table above.

Controlling the On-Screen Display (OSD)

The supplied remote also lets you perform almost all of the system operations using the on-screen display.





1 Be sure the input selector on your TV is set to video. If the input selector is set to TV, the on-screen display will not appear when you press OSD ON/OFF.

2 Press the OSD ON/OFF button so that the on-screen display appears on your TV screen.

3 Press the section of the OSD CONTROL representing the direction you want to move the pointer (hand shaped icon) in the on-screen display.

Position the pointer so that the finger tip is positioned on one of the on-screen items.

4 Press and quickly release the ENTER button in the center of the OSD CONTROL to "click" the item.

For specific information regarding the functions available through OSD.
Refer to the chapter for the respective function.

To return to the previous menu
Click RETURN or press RETURN on the remote control.

To exit to the main menu
Click EXIT or press EXIT on the remote control.

The on-screen display turns black-and-white (and may be difficult to see) when watching black-and-white program sources from VIDEO 1 or 2.
In this case, use VISUAL OFF (see page 59) or switch to a non-black-and-white source before using the on-screen display. Switch back to the black-and-white video source once you've completed the desired on-screen operation.

Enjoying Surround Sound

You can take advantage of surround sound simply by selecting one of the pre-programed sound fields according to the type of program you want to play. To obtain the best possible sound we recommend equalizing the speaker levels of the DOLBY SUR and THEATER sound modes before you begin (see "Adjusting the Speaker Output Levels" on page 27). This system is provided with four different surround modes:

DOLBY SUR. (Dolby Pro Logic Surround) mode
Reproduces superb theater-like presence and surround effects from video software encoded with Dolby Surround.

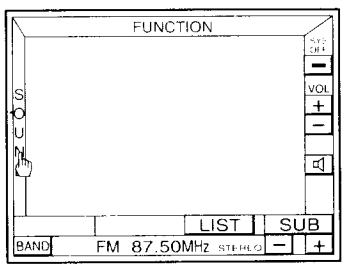
Note
Some videos and laser discs may use Dolby Surround sound even if it's not indicated on the package.

THEATER mode
Creates a theater-like environment in your living room by adding the acoustic reflections of a theater to decoded Dolby Surround signals.

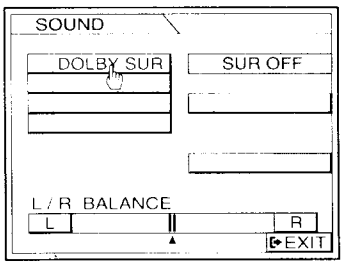
HALL mode
Reproduce the acoustics of a rectangular concert hall. Ideal for soft, acoustic sounds, or for giving an extra punch to debates and press conferences.

SIMULATED mode
Creates simulated stereo sound effects from monaural sound sources, like old movies or TV shows.

1 . While playing a program source, click SOUND in the main menu.



2 Click the sound mode you desire according to the descriptions above.



To listen without surround effects
Click SUR OFF.

To adjust the balance
Click L/R BALANCE L or R.
Balance settings are stored separately for each sound mode.

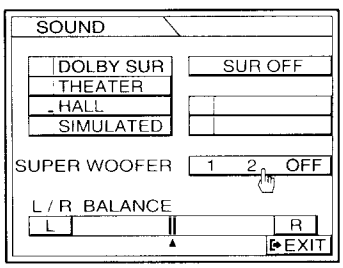
To mute the sound
Click [speaker] in the main menu. The icon changes to [muted speaker] and turns green. "MUTE ON" appear in the display on the receiver and the MUTING indicator on the front panel lights up. To turn the sound back on, click on the icon again.

To mute the sound without the on-screen display.
Press MUTING on the remote so that "MUTING" appears in the display on the right speaker.
Press again to restore the sound.

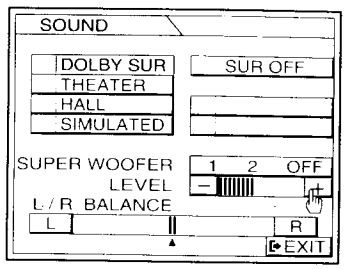
To select sound modes without the on-screen display
Press SURROUND on the speaker repeatedly so that the surround mode you desire appears in the display on the speaker.

To select a suitable super woofer mode

Click SUPER WOOFER (or press SW.MODE on the remote) repeatedly.
SUPER WOOFER 1 provides powerful bass sound ideal for movies. SUPER WOOFER 2 is a more subtle effect designed for music.



Then click LEVEL + or –.
The level settings are stored separately for SUPER WOOFER 1 and SUPER WOOFER 2.



To turn off the sound fields
Click SUR OFF.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

To select a super woofer without the on-screen display.
Press SW.MODE on the remote repeatedly so that S.WOOFER 1 (SUPER WOOFER 1) or S.WOOFER 2 appears in the display on the right speaker.

For other sound adjustments, see page 28.

The speakers turn off and on automatically (Auto power off/on function)
When the speakers are turned on and the FUNCTION is set to VIDEO 1 or VIDEO 2, the power turns off automatically (and the READY indicator on the left speaker turns red) three minutes after the program ends and the sound signal goes out.
The speakers turn themselves back on the next time you start playback from a source connected to VIDEO 1 or VIDEO 2.

Adjusting the Speaker Output Levels

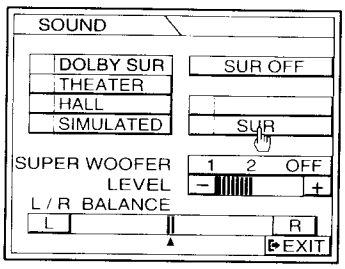
The test tone feature lets you set the volume of your speakers to the same level.
Be sure to make these adjustments from your listening position.

1 Click SOUND in the main menu.

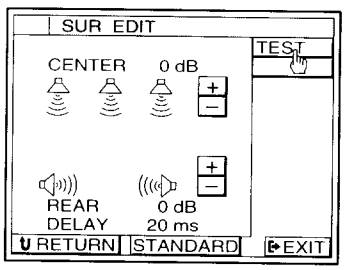
2 Click DOLBY SUR (PRO LOGIC) or THEATER.

3 If you need to adjust the volume between the front right and front left speakers, click BALANCE L or R.

4 Click SUR.



5 Click TEST.
The tone is emitted from each speaker sequentially. The speaker emitting the test tone is shown in red on the TV screen.



6 Adjust the volume levels so that you hear the test tone from each speaker at the same volume level when you are in your listening position:

To adjust the level of center speaker
Click CENTER + or –.

To adjust the level of rear speakers
Click REAR + or –.

7 Click TEST to turn off the test tone.

(continued)

To adjust the volume of all speakers at the same time

Press VOL + or – on the remote.

To reset the current sound field to the original factory settings

Click STANDARD.

To go back to the previous menu

Click RETURN or press RETURN on the remote control.
If the test tone is on, it turns off automatically.

To exit to the main menu.

Click EXIT or press EXIT on the remote control.
If the test tone is on, it turns off automatically.

Customizing the Sound Fields

Each sound field is composed of an tone (bass and treble) and surround sound parameters — variables of sound, that create the sound image.
You can customize the sound fields by adjusting the speaker level (LEVEL) and delay time (DELAY) surround parameters to suit your listening situation.
Once you customize the sound fields, they are stored in memory unless the system is unplugged for about 1 week.

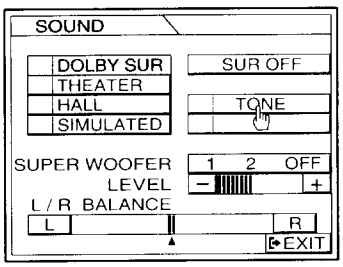
Adjusting the tone

Adjust the tone of the front, center and rear speakers for optimum sound. You can adjust the tone of all sounds fields, including Dolby Surround.

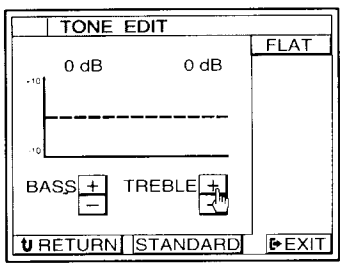
1 Start playing a program source, then click SOUND in the main menu.

2 Click the sound field you want to adjust.

3 Click TONE.
The TONE EDIT menu appears.



4 Click BASS + or – to adjust the level of the low frequencies and click TREBLE + or – to adjust the level of the high frequencies as you desire.



Note

You may hear some noise as you adjust the parameters.

To start adjustment with a flat equalizer curve.
Click FLAT.

To reset the tone parameter of the selected sound field to the original factory settings
Click STANDARD.

To go back to the previous menu
Click RETURN or press RETURN on the remote control.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

To adjust the volume
Press VOL + or – on the remote

Adjusting surround sound parameters

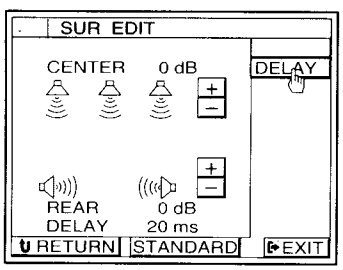
You can adjust the delay time and speaker levels individually for each sound field.
Delaying the output from the rear speakers (delay time) helps to make the surround sound more effective. For example, if you've placed the rear speakers in a large room or apart from your listening position, set the delay time shorter.
Although we recommend using the procedure described in "Adjusting the Speaker Output Levels" on page 27 for the DOLBY SUR and THEATER sound fields, you may need to adjust the HALL and SIMULATED speaker levels as shown below.

1 Start playing a program source, then click SOUND in the main menu.

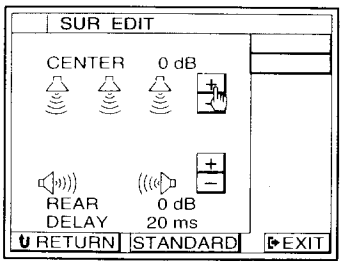
2 Click the sound field you want to adjust.

3 Click SUR.
The SUR EDIT menu appears.

To adjust the delay time
Click DELAY repeatedly to select the delay time you prefer (15 ms, 20 ms, or 30 ms).



To adjust the speaker levels
Click the + or – icon located next to the speakers to adjust the speakers to the levels you prefer.



To reset the delay time and speaker levels to the original factory settings.
Click STANDARD.

Note
You may hear some noise as you adjust the parameters.

To go back to the previous menu
Click RETURN or press RETURN on the remote control.

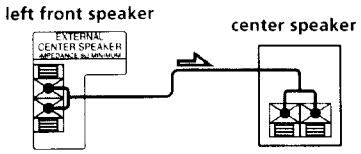
To exit to the main menu.
Click EXIT or press EXIT on the remote control.

To adjust the volume
Press VOL + or – on the remote

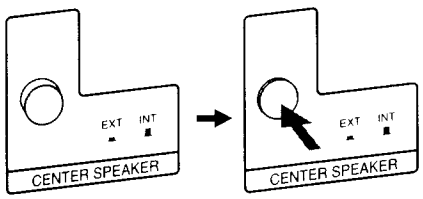
Note
If you make new adjustments to a sound field, the previous settings are replaced by the new ones.

Using an External Center Speaker

Since this system incorporates a center speaker (see page 5), you don't have to connect a center speaker. However, it is possible to connect a center speaker to the CENTER SPEAKER terminals if you already have one. Be sure to use a speaker with a 8 to 16 ohm impedance for the center speaker.



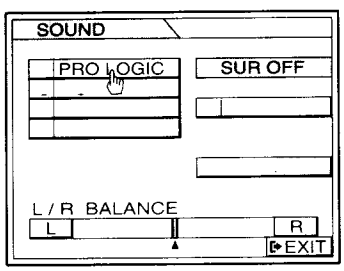
Depress the CENTER SPEAKER button on the rear panel of the left front speaker. This turns off the internal center speaker and directs the center channel signal to the CENTER SPEAKER terminals.



Connecting an external center speaker lets you choose from 4 different Dolby Pro Logic Surround center modes: NORMAL, WIDE, 3 CH (3 Channel logic), or PHANTOM. Use the NORMAL or WIDE mode. For details on Dolby Pro Logic Surround sound, see the "Glossary" on page 64.

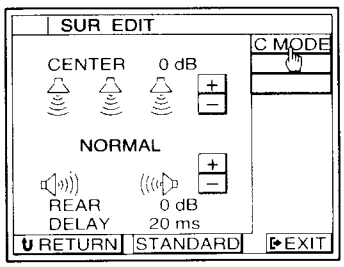
1 Click SOUND in the main menu.

2 Click PRO LOGIC to select the pro logic sound field.



3 Click SUR.
The SUR EDIT screen appears.

4 Click C MODE repeatedly until the center mode you want is displayed.



5 Adjust the speaker volumes and delay time, if necessary, by referring to pages 27 and 29.

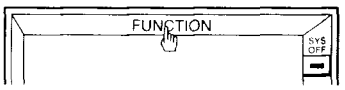
Playing a CD (normal play)

You can play CDs in four modes: normal, shuffle, program and repeat. The mode decides which tracks (songs) you will listen to, which order you will listen in, and whether or not they will repeat.
You can control the unit from the on screen display using the supplied remote.
Before you play a CD, decrease the sound level by pressing VOL – on the remote, to avoid damaging the speakers.
After loading up to seven CDs, you can play all tracks or discs in the original order consecutively (normal play).

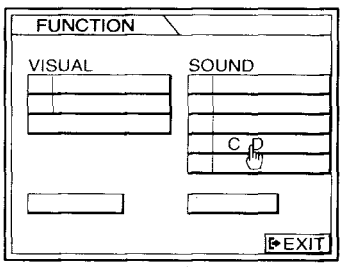
Note

You cannot play 8-cm CDs, even with an adaptor.

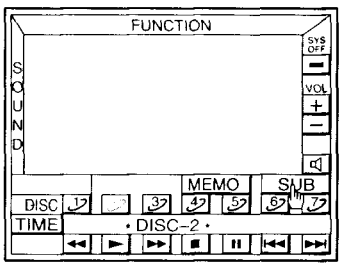
1 Click FUNCTION in the main menu.



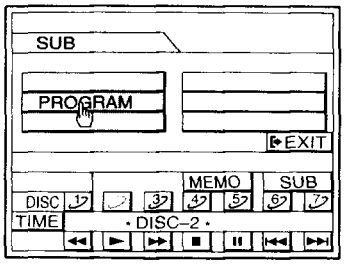
2 Click CD.



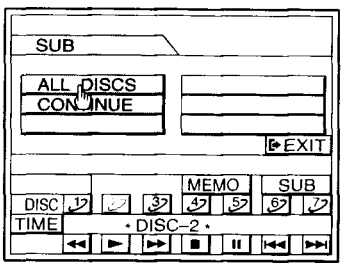
3 Click SUB



4 If PROGRAM or SHUFFLE appear in the SUB menu, click them repeatedly to select "CONTINUE".

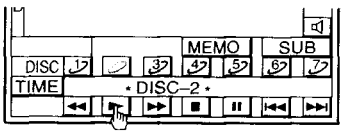


5 Click ALL DISCS (or 1 DISC) to select "1 DISC" or "ALL DISCS".



"1 DISC" plays all the tracks on the current CD in the original order.
"ALL DISCS" plays all the tracks on all the CDs loaded in the unit in the original order.

6 Click ► (play) or click a disc button (1 ~ 7).
Play starts from the beginning of the selected CD (the CD whose disc indicator is green).



If you click the disc button (1 ~ 7) for an empty disc tray

"OPEN" appears and the disc tray emerges automatically. Place a CD on the tray with the label side facing up (to insert additional CDs sequentially, press DISC SKIP on the remote), then click the respective disc button again.
The disc tray closes and play starts from the beginning the selected CD.

(continued)

To close the SUB menu

Click EXIT or press EXIT on the remote control.

To	Click
Stop play	■
Pause	❚❚
Resume play	► or ❚❚

What the disc buttons (1 ~ 7) indicate

The numbers on the disc buttons (1 ~ 7) change colors to indicate the status of the respective disc tray.

- A green disc number shows that the tray is selected (either during playback or standby, or when the tray is open) no matter if there is a CD inside or not.
- An orange disc number shows that there is a CD in the disc tray but the tray is not currently selected.

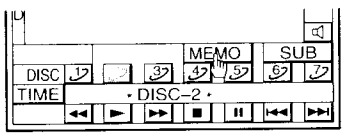
Playing a CD without using the on-screen display

Press CD ▻ on the remote to start playback, the CD function is selected automatically.

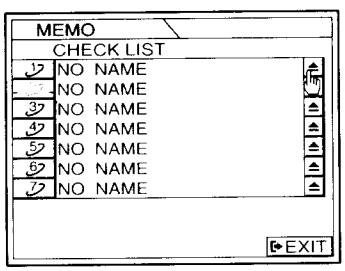
To	Press
Stop play	■ on the remote
Pause	❚❚ on the remote
Resume play	CD ▻ or ❚❚ on the remote

Removing a CD

1 Click MEMO.



2 Click ≜ at the right of the CD you want to eject.



To exit to the main menu.

Click EXIT or press EXIT on the remote control.

Removing a CD using the buttons on the speaker

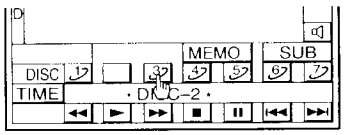
Press DISC 1 - 7 for the disc you want to eject, then press ≜ OPEN/CLOSE.
The selected disc tray emerges.
Press ≜ OPEN/CLOSE again to close the tray.

Locating a Specific CD

You can locate the beginning of any CD during playback or pause, or when the player is stopped.

To locate the beginning of a particular CD.

Click the corresponding disc button (1 - 7).



To change to the next CD

Press DISC SKIP on the remote.
During playback, the player selects the next CD and starts playback. During stop or pause, the player selects the next CD but remains in stop or pause mode.

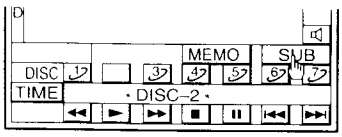
Locating a specific track (automatic music sensor: AMS)

You can quickly locate the beginning of a track on the current CD during play, pause, or stop mode.

To locate	Do this
The next or succeeding tracks	Click ►►I repeatedly until you find the track (or press ►►I on the remote repeatedly).
The current or preceding tracks	Click I◄◄ repeatedly until you find the track (or press I◄◄ on the remote repeatedly).

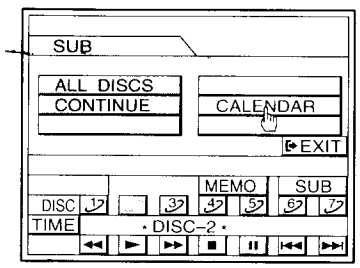
Locating a track directly

1 Click SUB

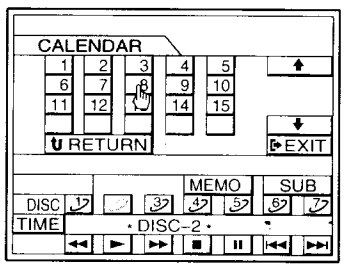


This function is only available when the CD player is set to the CONTINUE play mode.
If PROGRAM or SHUFFLE appear in the SUB menu, click them repeatedly to select "CONTINUE".

2 Click CALENDAR



3 Click the icon for the track you desire.



To display track numbers not shown on the current CD calendar (for CDs with more than 20 tracks).
Click the ↑ or ↓ icon located next to the CD calendar.

To return to the previous menu.
Click RETURN or press RETURN on the remote control.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Locating a track directly without using the on-screen display
Press the numeric button on the remote for the track you want. If the track number is greater than 10, press >10 and the track number.
e.g. For track number 21, press >10, 2, 1.
For track number 20, press >10, 2, 10/0.

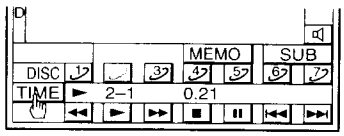
Locating a particular point in a track

You can locate a particular point in a track while monitoring the sound or quickly by observing the display.

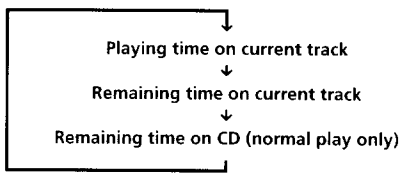
To	Click and hold down
Go forward quickly	▶▶ and release it at the desired point.
Go backwards quickly	◀◀ and release it at the desired point.
Search quickly by observing the display during pause	◀◀ or ▶▶ until you find the desired point. You will not hear the sound during this operation.

Checking the remaining or total playing time

Click TIME.



Each time you click TIME while playing a CD, the display changes as follows.

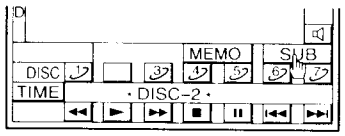


Notes
- You can also check the remaining time on the current track during shuffle, and program play.
- The total playing time and number of tracks for the current disc appear in the display if you wait a few seconds after pressing ⏏ OPEN/CLOSE on the front of the right speaker to close a disc tray.

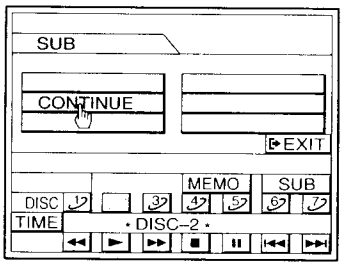
Playing Tracks in Random Order (shuffle play)

You can play all the tracks on one CD or all CDs in random order.

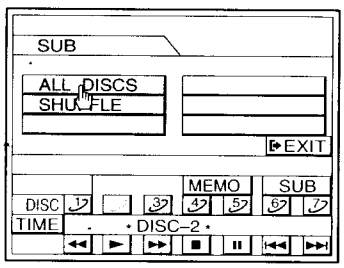
1 Click SUB.



2 Click CONTINUE repeatedly to select "SHUFFLE".

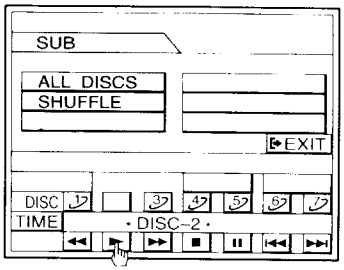


3 Click ALL DISCS (or 1 DISC) to select "1 DISC" or "ALL DISCS".



"1 DISC" plays all the tracks on the current CD at random.
"ALL DISCS" plays all the tracks on all the CDs loaded in the unit at random.

4 Click ►



To stop playing

Click ■.

To cancel shuffle play

Click SHUFFLE repeatedly to select "CONTINUE". The tracks continue playing in their original order.

To close the SUB menu

Click EXIT or press EXIT on the remote control.

Play the next track during shuffle play

Click ►►|.
To replay the current track from the beginning, click |◄◄.
You cannot replay the previous track .

To select the desired disc during "1 DISC" shuffle

Click the respective disc button (~).

To start shuffle play immediately after the current track.

Press CONTINUE repeatedly during playback to select "SHUFFLE" and shuffle play starts as soon as the current track finishes playback.

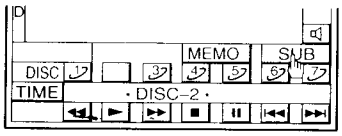
Playing tracks in random order without using the on-screen display

1 Press PLAY MODE on the remote repeatedly so that "SHUFFLE" appears in the display on the right speaker.
2 Press 1/ALL repeatedly to select "1 DISC" or "ALL DISCS".
3 Press CD ▷.

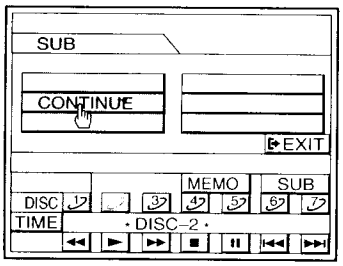
Playing Tracks in a Desired Order (program play)

You can program up to 32 program steps from all the CDs in the order you want them to play. You can program one track or a whole CD in search Program step.
To record a program, see the section "Recording a CD: Specifying Track Order (program edit)".

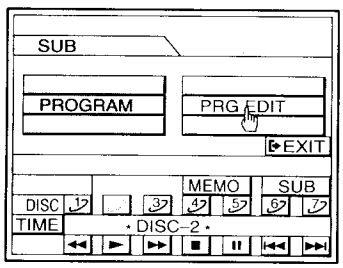
1 Click SUB.



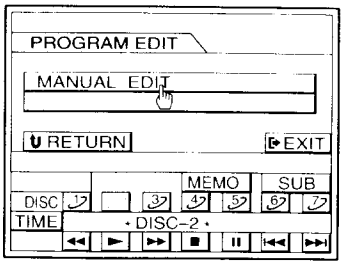
2 Click CONTINUE repeatedly to select "PROGRAM".



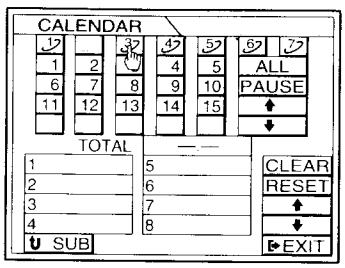
3 Click PRG EDIT.



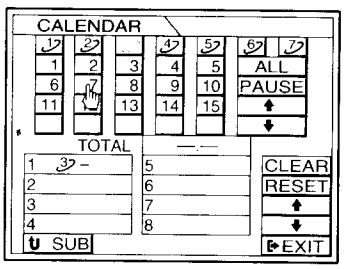
4 Click MANUAL EDIT.



5 Click the disc icon (~) for the disc containing the tracks you want to program.



6 Click the track number for the track you want to program.



To program the entire disc.
Click ALL.

To display track numbers not shown on the current CD calendar (for CDs with more than 20 tracks).
Click the ↑ or ↓ icon located next to the CD calendar.

To check the contents of the program
Click the ↑ or ↓ icon located next to the program steps.

If you make a mistake.
Click CLEAR then click the step(s) you want to remove. When you've finished, click SUB or EXIT.

(continued)

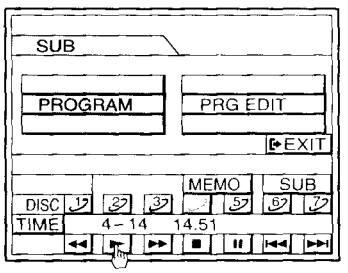
To select a track number using the numeric keys on the remote

Press the numeric button corresponding to the track number you desire.
To enter a track number greater than 10, press >10 first, then press the corresponding numeric buttons.
e.g. For 30, press >10→3→10/0

7 Repeat steps 5 and 6 to program up to 32 steps.

8 Click SUB to return to the SUB menu or EXIT to exit to the main menu.

9 Click ►.
All the tracks play in the order you have chosen.



To stop playing

Click ■.

To play	Do this
The next or succeeding tracks	Click ►►I repeatedly until you find the track (or press ►►I on the remote repeatedly).
The current or preceding tracks	Click I◄◄ repeatedly until you find the track (or press I◄◄ on the remote repeatedly).

To cancel program play

Click PROGRAM repeatedly to select "CONTINUE". The tracks continue playing in their original order.

To erase the programed contents

Click RESET in the PROGRAM EDIT menu.

Programming from the remote without using the on-screen display

1 Press ■.
If you switch to program mode during playback, the track being played is automatically programmed as step 1.

2 Press PLAY MODE repeatedly so that "PROGRAM" appears in the display on the right speaker.

3 Press DISC SKIP to select a CD.
The disc number appears and after a few seconds the total playing time begins to flash in the display.

4 Press I◄◄ or ►►I to select a track number.
The track number and the total playing time including the selected track flashes in the display. (The program is not entered at this time.)

To select a track number using the numeric keys

Press the numeric button corresponding to the track number you desire. The track is programmed automatically, so you can skip step 5.
To enter a track number greater than 10, press >10 first, then press the corresponding numeric buttons.
e.g. For 30, press >10→3→10/0

5 Press PLAY MODE to enter the track.
If the track (or disc) number disappears before you press PLAY MODE, go back to step 3.
If you program the wrong track.
Press CLEAR, and go back to step 3.

6 To program additional tracks from the same CD, repeat step 4.
To program additional tracks from another CD, repeat steps 3 and 4.

7 Press CD ▻.
All the tracks play in the order you have chosen.

To cancel program play

Press PLAY MODE repeatedly so that the PROGRAM indicator disappears from the display.

To erase the programmed contents

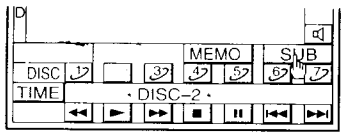
Press ■ during stop mode or press PLAY MODE repeatedly so that the PROGRAM indicator disappears from the display.

Playing Tracks Repeatedly (repeat play)

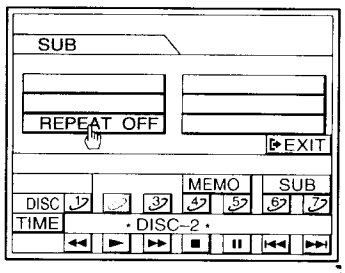
You can choose between two different repeat modes. One repeats all the tracks in the current play mode, the other repeats a single track.

The repeat play repeats a single CD or all CDs during normal and program playback. During shuffle play, repeat play repeats one CD only (1 DISC mode shuffle play). In normal play mode (only), the player can also repeat a single track.

1 Click SUB.



2 Click REPEAT OFF repeatedly to select "REPEAT" to repeat all the tracks (in any play mode), or "REPEAT 1" to repeat a single track while playing the desired track (during normal play only).



Play mode	Tracks to be repeated
Normal play (ALL DISCS)	All tracks on all CDs
Normal play (1 DISC)	All tracks on the selected CD
Shuffle play (1 DISC)	All tracks on the selected CD (reshuffled)
Program play	All programmed tracks/ programs in their programmed order

To cancel repeat play

Click the repeat button repeatedly to display "REPEAT OFF".

Playing tracks repeatedly without using the on-screen display

Press REPEAT on the remote repeatedly so that "REPEAT" or "REPEAT1" appears in the display on the right speaker.

Assigning Names to CDs (disc memo)

You can assign names to your CDs. The names may consist of uppercase and lowercase letters, numbers and symbols (up to 20 characters long for each CD). You can store a maximum of 100 names in the unit. The names appear in the disc memo list, making it easy to identify which CDs are currently loaded.

Note

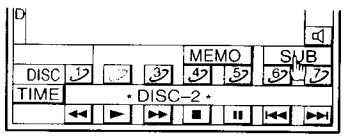
If the AC power cord is disconnected for about one week, the disc memos may be cleared from the memory, and you will have to store the names again.

Before you start assigning names

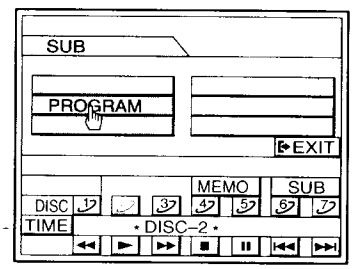
In order to take advantage of the full (100 disc) memory capacity, do steps 1 through 4 of "Erasing all the disc memos" on page 39 to erase the disc memo data entered at the factory.
You only need to perform this procedure once; before assigning names for the first time.

Assigning a Name

1 Click SUB

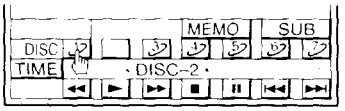


2 If PROGRAM or SHUFFLE appear in the SUB menu, click them repeatedly to select "CONTINUE".

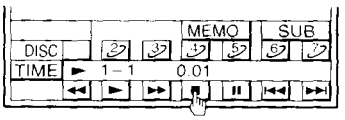


(continued)

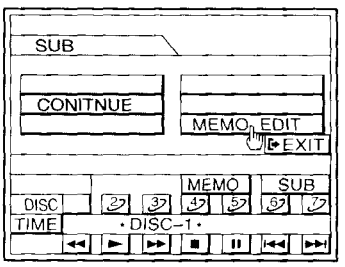
3 Click a disc button to select the disc tray containing the disc to be named. The number on the button turns green if there is a disc in the tray. If not, the disc tray emerges.



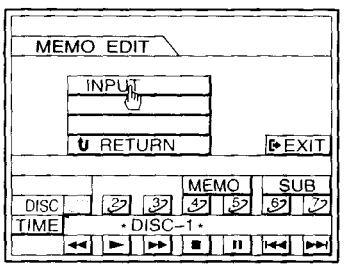
4 Click ■ (or press ■ on the remote).
Names cannot be assigned during playback.



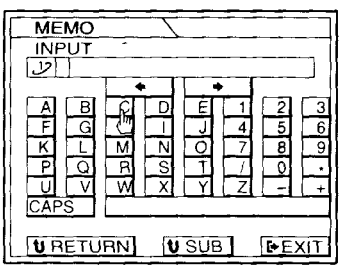
5 Click MEMO EDIT.



6 Click INPUT.



7 Spell out the name by clicking each character in order.



To enter a space
Click the space bar.
(You cannot enter a space as the first character.)

To switch between upper and lower case letters
Click CAPS.

If you make a mistake
Click ← or → to move the cursor to the character to be changed, then click the correct character (or click the space bar to erase the character).

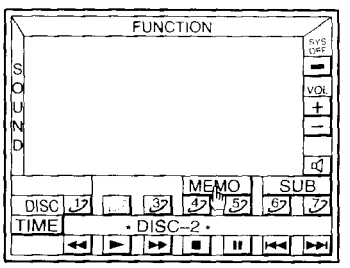
8 Click RETURN or press RETURN on the remote control.
The name is stored automatically.

To assign a name to another disc
Click the disc you want to name, click ■ (or press ■ on the remote), then repeat steps 6 and 7.

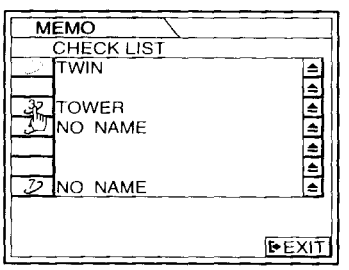
To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Checking the currently loaded CDs

Click MEMO.



The MEMO CHECK LIST showing the names of the currently loaded CDs appears.



To play a CD
Click the respective disc button (ﻝ ~ ﻝ) when the CD player is set to CONTINUE mode.

If a CD has not been assigned a name
"NO NAME" appears next to that disc number.

If a CD is not loaded
The disc number for the respective tray is white and no characters appear next to that button.

If remove or load a CD
Click the ⏏ icon for the respective tray and that tray emerges.
Click again to close the tray.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Erase a disc memo

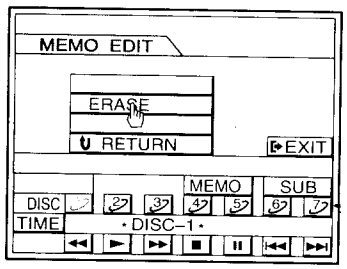
You can erase the names of currently loaded discs.

1 Load the disc whose name you want to erase, and make sure play is stopped.
Names cannot be erased during playback.

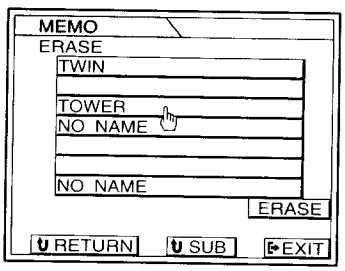
2 Click SUB.

3 Click MEMO EDIT.

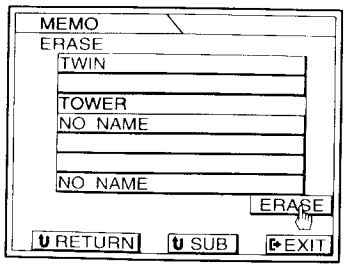
4 Click ERASE.



5 Click The button to highlight the disc memo you want to erase.



6 Click ERASE.
"ERASE OK" appears and the memo is erased.



To go back to the previous menu
Click RETURN or press RETURN on the remote control.

To go back to the SUB menu
Click SUB.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Erasing all the disc memos

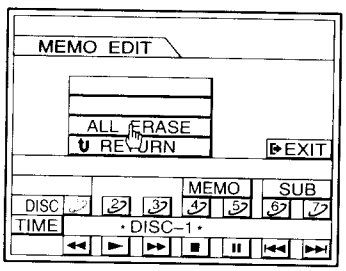
The following procedure lets you erase all the disc memo information stored in the memory.

1 If a CD is playing, click ■ (or press ■ on the remote).
Names cannot be erased during playback.

2 Click SUB.

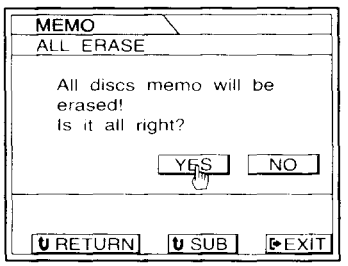
3 Click MEMO EDIT.

4 Click ALL ERASE.



(continued)

5 Click YES to erase all the names currently stored in memory.



To go back to the previous menu
Click RETURN or press RETURN on the remote control.

To go back to the SUB menu
Click SUB.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Listening to the Radio

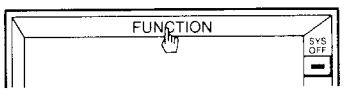
When you want to play a radio program, you can have the tuner automatically scan the radio frequencies and tune in the stations with clear signals. This feature saves you time in searching for stations with clear signals.
However, stations with weak signals may be skipped by automatic tuning. Manually tune in the ones skipped by automatic tuning.

To prevent noise pickup, keep the AM loop antenna away from the unit and TV set.
If the noise is not reduced, turning off your TV may improve reception.

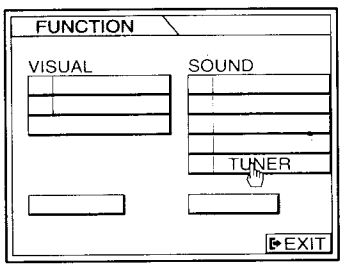
Before you start

make sure you have connected the FM and AM antennas as shown on pages 9 and 10.

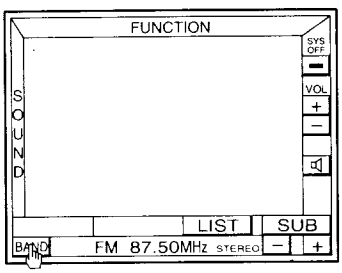
1 Click FUNCTION in the main menu.



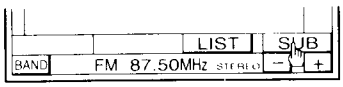
2 Click TUNER .



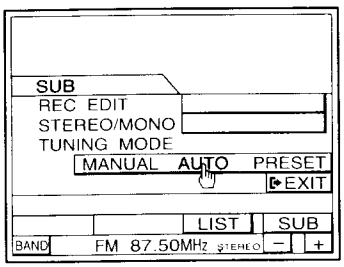
3 Click BAND to select FM or AM.



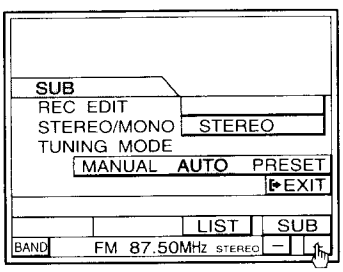
4 Click SUB



5 Click TUNING MODE repeatedly to select AUTO.



6 Click + or – next to the frequency to tune in a station.



The tuner starts scanning radio frequencies and stops automatically when it finds a clear station. When an FM stereo broadcast is received, "STEREO" turns from grey to orange.
When you tune past either end of the band, the tuner automatically jumps to the opposite end and continues scanning in the same direction. Every time a station is received, the tuner stops scanning. To continue scanning, press the icon again.

When the desired station is not tuned in
Automatic tuning may skip stations with a weak signals. Tune in the station manually.
1 Click TUNING MODE repeatedly to select "MANUAL".
2 Click + or – repeatedly until the desired station is tuned in.

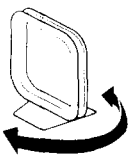
(continued)

When reception of an FM program is unclear

You can switch to monaural reception. There will be no stereo effect but the reception will improve.
Click STEREO/MONO repeatedly to select "MONO". "MONO" also appears next to the frequency.
To restore the stereo effect, repeat this procedure to select "STEREO".

To improve AM broadcast reception

Reorient the supplied AM loop antenna.



To change the AM tuning interval

The AM tuning interval is preset to 10 kHz in the factory.
If you need to change the interval to 9 kHz, do as follows:
1 Turn on the power.
2 Change the band to AM.
3 Turn off the power.
4 Turn the power back on while pressing SYSTEM POWER and TUNING + on the unit.
After changing the AM tuning interval, reset the preset radio stations. To reset the interval to the factory setting (10 kHz), follow the same procedure.

To go back to the previous menu

Click RETURN or press RETURN on the remote control.

To exit to the main menu.

Click EXIT or press EXIT on the remote control.

To watch FM simulcast TV programs

Make sure that you tune in the simulcast program on both the TV (or VCR) and the tuner.

Presetting Radio Stations

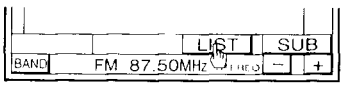
You can store up to 30 FM or AM stations, and recall them later with a simple click.
To assign names to the preset stations, see "Naming Preset Stations".

Note

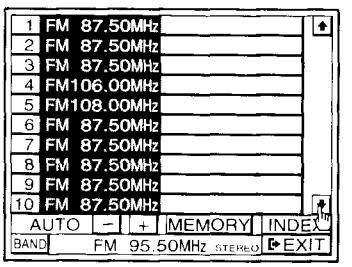
If the AC power cord is disconnected for about one week, the preset stations may be cleared from the memory, and you will have to preset the stations again.

1 Tune in a station you want to store in the preset memory.

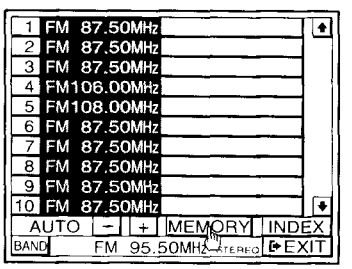
2 Click LIST to display the tuner's preset list.



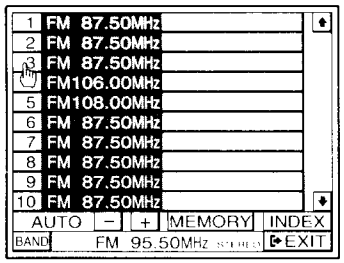
3 Click ↑ or ↓ to display the preset button (1~30) where you want to store the station.



4 Click MEMORY.
MEMORY turns red.



5 Click the button where you want to store the station.
The button lights up and the station is stored.



6 Repeat steps 1 through 5 to preset up to 30 stations.

To erase a stored station

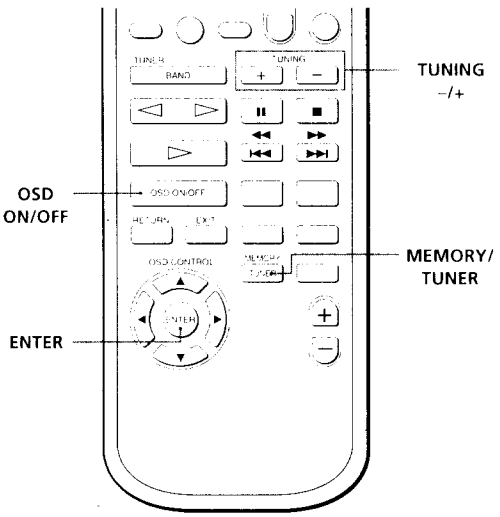
Store a new station at a previously used preset button. This will erase the old station and replace it with the new station.

If you have trouble storing a station or if you made a mistake

Repeat steps 1 through 5.
Make sure that the MEMORY button is red when you proceed to step 5. If not, press MEMORY again so that MEMORY turns red, then proceed with step 5 while MEMORY is red (within 16 seconds).

Presetting radio stations without using the on-screen display

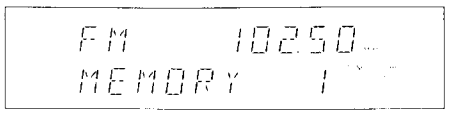
You can also preset stations without using the on-screen display. You might find this necessary to preset broadcasts that are difficult to receive when the TV is turned on, such as those from AM stations.



1 Press OSD ON / OFF to turn off the on-screen display, then turn off your TV.
"OSD OFF" appears momentarily in the display.

2 Tune in a station you want to store in the preset memory.

3 Press MEMORY / TUNER.
"MEMORY" and a preset channel number appear in the display.



4 Press TUNING + or – to select a preset channel number.

5 Press ENTER.
The station is stored at the preset channel number you selected.

6 Repeat steps 2 through 5 to store as many stations as necessary.

Tuning Preset Stations

Once you have preset the stations, you can tune stations directly from the tuner's preset list or one by one from the main menu or remote control.

Tuning Preset Stations Directly

1 Click FUNCTION in the main menu.

2 Click TUNER .

3 Click LIST to display the tuner's preset list.

4 Click ↑ or ↓ to display the preset station (1~30) you desire.

5 Click the preset number of the station you desire.

(continued)

Tuning Preset Stations One by One

1 Click FUNCTION in the main menu.

2 Click TUNER.

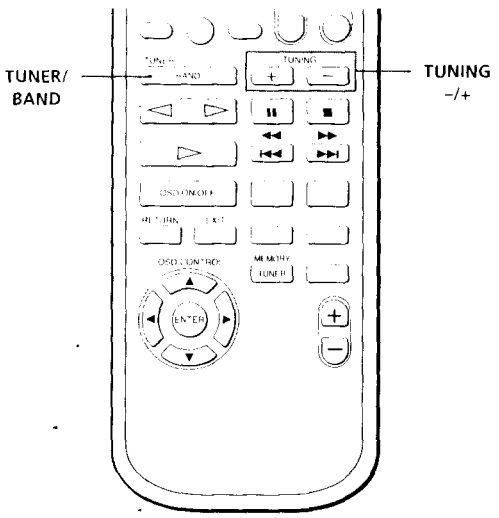
3 Click SUB.

4 Click TUNING MODE repeatedly to select "PRESET".

5 Click + or – next to the frequency to tune in a preset station.

Tuning preset stations without using the on-screen display

You can also tune stations without using the on-screen display. You might find this necessary for broadcasts that are difficult to receive when the TV is turned on, such as those from AM stations.



1 Press TUNER/BAND repeatedly to select FM or AM.

2 Press TUNING MODE on the right front speaker repeatedly so that "PRESET" appears in the display.

3 Press TUNING + or – to tune in desired the preset station.

Naming Preset Stations

You can customize the tuner's preset list by entering names up to 10 characters long for each preset radio station.

1 Click FUNCTION in the main menu.

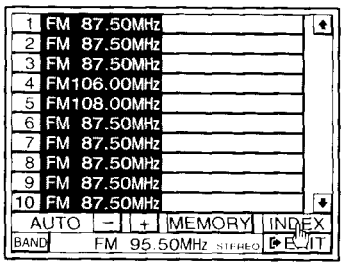
2 Click TUNER.

3 Click LIST to display the tuner's preset list.

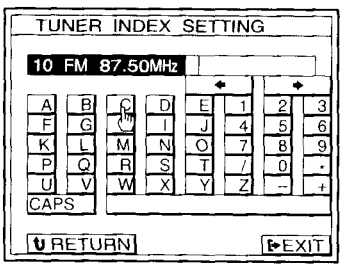
4 Click ↑ or ↓ to display the preset station (1 ~ 30) you want to name.

5 Click the preset number of the station you want to name.

6 Click INDEX.
The TUNER INDEX SETTING menu appears.



7 Spell out the name by clicking each character in order.



To enter a space
Click the space bar.

To switch between upper and lower case letters
Click CAPS.

If you make a mistake
Click ← or → to move the cursor to the character to be changed, then click the correct character (or click the space bar to erase the character).

8 Click RETURN or press RETURN on the remote control.
The name is stored automatically.

To erase a preset name
You can erase the station name by changing all the characters of that name to "spaces".

To go back to the previous menu
Click RETURN or press RETURN on the remote control.

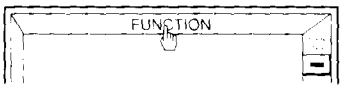
To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Note
The input name is visible when you click LIST to use the tuner's preset list function.
This name is not shown in the display on the unit.

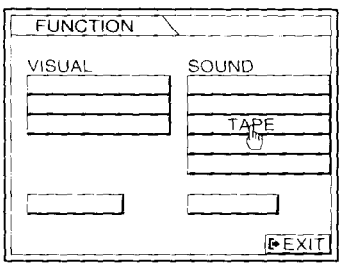
Playing a Tape

You can use TYPE I (normal), TYPE II (CrO2) and TYPE IV (metal) tapes. When you insert a tape, the deck detects the tape type automatically.

1 Click FUNCTION in the main menu.

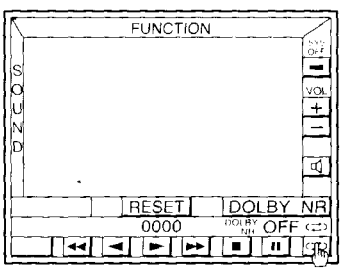


2 Click TAPE.



3 Press EJECT ⏏ on the right speaker to open the tape compartment. Insert a recorded tape in with the tape side down and the side you want to play facing forward. Push to close the compartment. The tape will start playing from the front side.

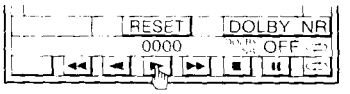
4 Click ⇄ repeatedly to select single or dual-sided playback.



To play	Click to display
One side of the tape	⇀
Each side once	⇄
Both sides repeatedly*	⇄

* The deck stops automatically after playing both sides 5 times.

5 Click ► (to play the front side) or ◄ (to play the reverse side).
The tape starts playing.



To	Click
Stop play	■
Pause	❚❚
Resume play	► or ❚❚
Fast Forward	►► for the front side or ◄◄ for the reverse side
Rewind	◄◄ for the front side or ►► for the reverse side

To find the beginning of a track (AMS)

Be sure to use the controls on the unit or the remote for this operation.
Using the AMS (Automatic Music Sensor) feature, you can quickly find the track you're looking for. The deck senses where a music track begins by detecting a blank space of more than four seconds between tracks.

If the side of the cassette being played is the	To play the next track press (remote)	To play the current track press (remote)
Front side (►)	►► (TAPE ►►)	◄◄ (TAPE ◄◄)
Reverse side (◄)	◄◄ (TAPE ◄◄)	►► (TAPE ►►)

Note

The AMS function may not work correctly if:

- the blank space between tracks is less than 4 seconds long.
- the signal strength of the left and right channels are very different.
- there is a passage of low frequencies or a very low volume within a track.

To remove the cassette

Press EJECT ⏏ on the front of the right speaker.

When listening to a tape recorded with the Dolby noise reduction system

Click DOLBY NR repeatedly to select "DOLBY NR: B" or "DOLBY NR: C" according to the noise reduction system used in recording. Dolby noise reduction system reduces tape hiss noise in low-level high-frequency signals.

To reset the tape counter

Click RESET.
The tape counter display returns to "0000". The tape counter is also reset when you unplug the AC power cord or press EJECT ⏏ to switch tapes.

Recording from CD

You can record from a CD to a tape. Use TYPE I (normal) or TYPE II (CrO2) tapes.

Recording from CD Automatically

The CD SYNCHRO function makes it easy to record from a CD to a tape.

1 Press EJECT ⏏ on the right speaker and insert a blank tape into the tape deck, with the side you want to record facing forward.
Make sure the tabs on the cassette have not been removed.

When "NO TAB" is displayed
The tabs on the cassette deck have been removed to prevent accidental erasure.

2 Click FUNCTION in the main menu.

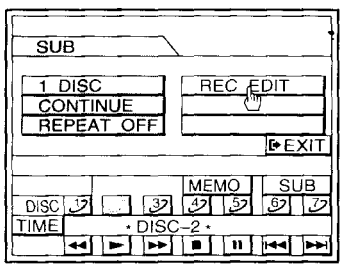
3 Click CD.

4 Click SUB.

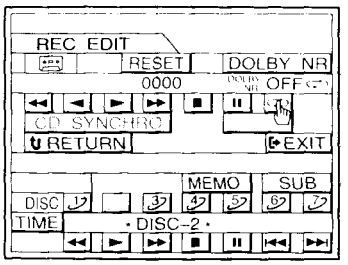
5 Select the play mode you desire and, if necessary, click a disc button (♫ ~ ♫) to choose a CD.

When the play mode is set to either CONTINUE or SHUFFLE
Clicking a disc button starts playback. In this case, click ■ to stop playback before proceeding to step 6.

6 Click REC EDIT.



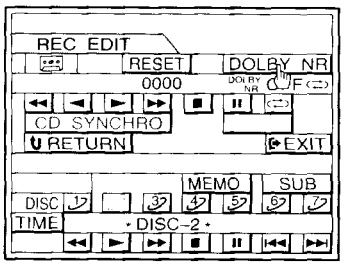
7 Click ⇄ repeatedly to select how to record the tape.



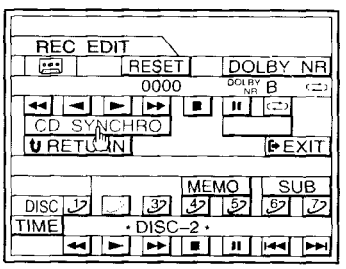
To record	Click to display
One side of the tape	⇆
Both sides*	⇉ or ⇄

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

8 Click DOLBY NR to select "DOLBY NR: B" or "DOLBY NR: C" when you want to reduce tape hiss in low-level, high- frequency signals.



9 Click CD SYNCHRO.

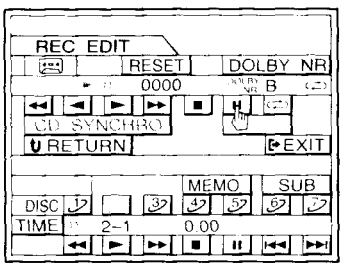


"CD SYNC" appears and the CD player and tape deck enter recording pause mode. The direction indicator in the REC EDIT control panel (►) indicates the direction in which recording will start.

If you want to record on the reverse side only
Click ◄ so that ◄ appears.

(continued)

10 Click ❚❚ PAUSE to release recording pause.
Recording starts.
After about 10 seconds, the CD starts to play.



To stop recording,
Click ■ in the REC EDIT control panel.

If the CD SYNCHRO button does not operate
It means that you cannot record on this cassette (the tabs have been removed).

If you press the CD SYNCHRO button while playing a CD
It is cancelled after 10 seconds. The CD SYNCHRO button only works when the CD player is in stop mode.

When you record more than one CD
The tape automatically pauses the recording while the CD player changes the disc trays.

To go back to the previous menu
Click RETURN or press RETURN on the remote control.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Note
Adjusting the volume will not effect the recording level. But this will change the sound levels you hear through the speakers or headphones.

Recording from CD Manually

With manual recording you can record a CD however you like, for example, you can record just the songs you want, or start recording from the middle of the tape.

1 Press EJECT ⏏ on the right speaker and insert a blank tape into the tape deck, with the side you want to record facing forward.
Make sure the tabs on the cassette have not been removed.

2 Click FUNCTION in the main menu.

3 Click CD.

4 Click SUB.

5 Select the play mode you desire and, if necessary, click a disc button (1 ~ 7) to choose a CD.

When the play mode is set to either CONTINUE or SHUFFLE
Clicking a disc button starts playback. In this case, click ■ to stop playback before proceeding to step 6.

6 Click REC EDIT.

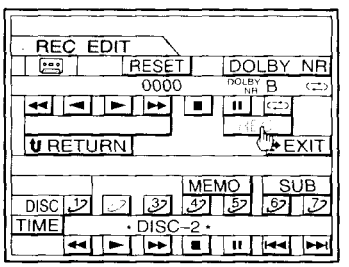
7 Click ⇄ repeatedly to select how to record the tape.

To record	Click to display
One side of the tape	⇉
Both sides*	⇄ or ⇆

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

8 Click DOLBY NR to select "DOLBY NR: B" or "DOLBY NR: C" when you want to reduce tape hiss in low-level, high- frequency signals.

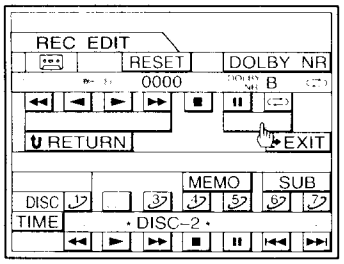
9 Click REC.



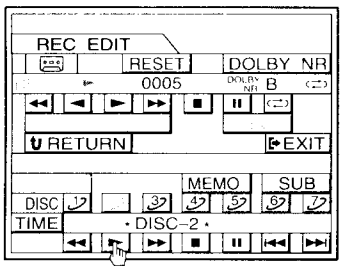
"REC" appears and the tape deck enters recording pause mode. The direction indicator in the REC EDIT control panel (►) indicates the direction in which recording will start.

If you want to record on the reverse side only
Click ◄ so that ◄ appears.

10 Click ❚❚ in the REC EDIT control panel, to release recording pause. Recording starts.
You can also start recording by clicking ► or ◄.



11 Click ► in the CD control panel.
The CD player starts playing.



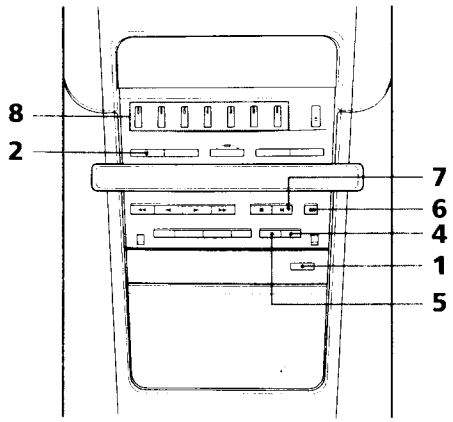
To insert a blank space
See "Inserting a Blank Space During Recording (rec mute)" on page 56.

To go back to the previous menu
Click RETURN or press RETURN on the remote control.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Notes
- Adjusting the volume will not effect the recording level. But this will change the sound levels you hear through the speakers or headphones.
- If you want to record specific tracks of a CD, the "program edit" feature will make it easier (see page 52).

Recording from CD manually using the controls on the speaker



1 Press EJECT ⏏ and insert a blank tape into the tape deck, with the side you want to record facing forward.
Make sure the tabs on the cassette have not been removed.

2 Press FUNCTION repeatedly to select CD.

3 If "PROGRAM" or "SHUFFLE" appear in the display, press PLAY MODE on the remote control repeatedly until they disappear.

4 Press DIRECTION repeatedly to select how to record the tape.

To record	Select
One side of the tape	⇆
Both sides*	⮌ or ⮂

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

5 Press DOLBY NR repeatedly to select DOLBY NR B or C when you want to reduce tape hiss in low-level, high- frequency signals.

(continued)

6 Press REC.
The ● (REC) and ❚❚ (pause) indicators light up and the deck stands by for recording.
The direction indicators (◄ or ►) light to indicate which sides of the cassette you can use to record. (For a full explanation of the ◄ and ► indicators, see "What the ◄ and ► indicators indicate" on page 50.)

If you want to record on the reverse side only
Press ◄ so the ◄ indicator lights steadily.

7 Press ❚❚, to release the record pause and start recording.

8 Press DISC 1 ~ 7 to start playback from the beginning of the CD you want to record.

To stop recording
Press STOP ■ twice. Once to stop the tape deck and once to stop the CD player.

To insert a blank space
See "Inserting a blank space during recording using the controls on the speaker" on page 57.

What the ◄ and ► indicators indicate
The ◄ and ► indicators light to indicate which side starts recording. They also tell you if a tab has been removed.
- If one indicator lights steadily and the other indicator flashes for a few seconds, then disappears:
  It means that recording will start from the side whose indicator lights steadily. If you want to start recording from the other side, press the button for that side.
- If one indicator lights steadily and the other indicator neither lights or flashes:
  It means you can only record on the side whose indicator lights steadily. (The tab for the other side has been removed.)
- If one indicator flashes steadily and the other indicator neither lights or flashes:
  It means that record on the side whose indicator is flashing steadily. Switch the side, from which to start recording, by pressing the direction button for the side whose indicator is flashing.
- If both indicators neither light or flash:
  It means that you cannot record on this cassette. (Both tabs have been removed.)

Note
Adjusting the volume will not effect the recording level. But this will change the sound levels you hear through the speakers or headphones.

Recording from CD: Selecting Tape Length Automatically (tape select edit)

You can have the CD player select and indicate the most suitable tape length for recording each disc automatically. Note that you cannot use this function when the CD has tracks numbered 21 or higher.

1 Click FUNCTION in the main menu.

2 Click CD.

3 Click SUB.

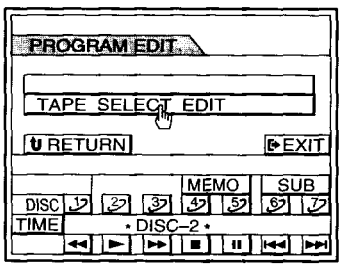
4 Select the CONTINUE play mode.

5 Click a disc button (♪ ~ ♪) to choose a CD.
Since playback starts automatically, click ■ to stop playback.
Tape select edit cannot be used during playback.

6 Click CONTINUE repeatedly to select "PROGRAM".

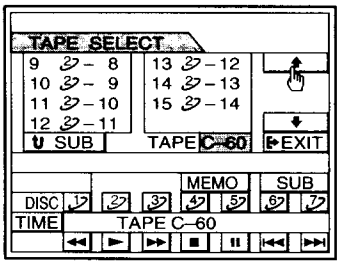
7 Click PRG EDIT.
The PROGRAM EDIT menu appears.

8 Click TAPE SELECT EDIT.

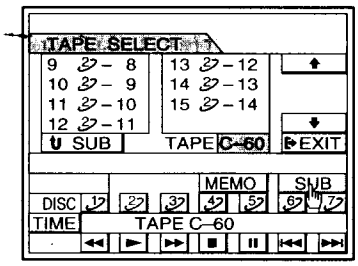


The TAPE SELECT menu appears and the player automatically divides the tracks and displays the tape length required to record the entire CD.

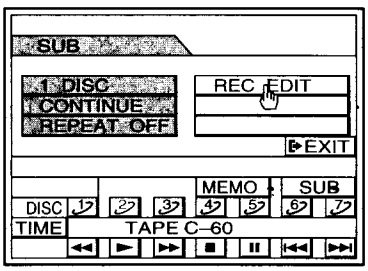
To view the order of the programed tracks
Click ↑ or ↓.



9 Click SUB to return to the SUB menu.



10 Click REC EDIT.
The required tape length remains displayed.



11 Press EJECT ⏏ on the right speaker and insert a blank tape of the indicated length (or longer) into the tape deck, with the side you want to record facing forward.
Make sure the tabs on the cassette have not been removed.

12 Click ⇄ repeatedly to select how to record the tape.

To record	Click to display
One side of the tape	⇆
Both sides*	⇄ or ⇄

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

13 Click DOLBY NR to select "DOLBY NR: B" or "DOLBY NR: C" when you want to reduce tape hiss in low-level, high- frequency signals.

14 Click CD SYNCHRO.
"CD SYNC" appears and the CD player and tape deck enter recording pause mode. The direction indicator in the REC EDIT control panel (►) indicates the direction in which recording will start.

If you want to record on the reverse side only
Click ◄ so that ◄ appears.

15 Click ⏸ PAUSE to release recording pause.
Recording starts.
After about 10 seconds, the CD starts to play.

To stop recording
Press ■ in the REC EDIT control panel.

To cancel the CD program play mode before starting to record (in step 15)
Click PROGRAM repeatedly to select "CONTINUE".
The program play mode cannot be cancelled during synchro recording.

To record another CD using Tape select edit
1 Click ■ to stop playback.
2 Click SUB.
3 Click PRG EDIT.
4 Click MANUAL EDIT.
5 Click RESET to erase the previous tape select edit program, then click SUB<.
6 Click a disc button (1 ~ 7) to choose a CD, then click ■.
7 Follow steps 7 through 13 above.

To go back to the previous menu
Click RETURN or press RETURN on the remote control.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Note
Adjusting the volume will not effect the recording level. But this will change the sound levels you hear through the speakers or headphones.

(continued)

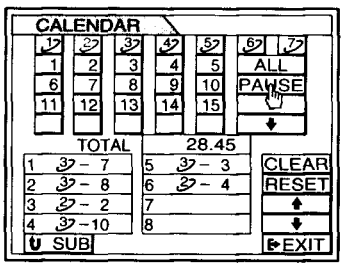
Recording from CD: Specifying Track Order (program edit)

You can match the total recording time to the tape length while making a program.

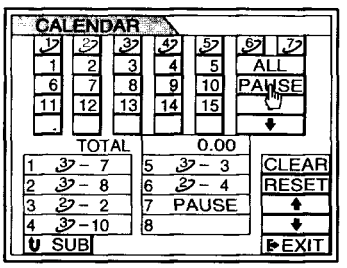
1 Press EJECT ⏏ on the right speaker and insert a blank tape into the tape deck, with the side you want to record facing forward.
Make sure the tabs on the cassette have not been removed.

2 Follow the procedure in steps 1 through 7 of "Playing Tracks in a Desired Order (program play)" on page 35 to program the tracks you want to record for side A. Make sure the total playing time for side A does not exceed the length of one side of the tape.

3 Click PAUSE.



The total playing time returns to "0.00."



4 Program the tracks you want to record for side B the same way you programed side A.

5 Click SUB to return to the SUB menu.

6 Click REC EDIT.
The program length for side B remains displayed.

7 Click ⇄ repeatedly to select how to record the tape.

To record	Click to display
One side of the tape	⇆
Both sides*	⮌ or ⇄

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

8 Click DOLBY NR to select "DOLBY NR: B" or "DOLBY NR: C" when you want to reduce tape hiss in low-level, high- frequency signals.

9 Click CD SYNCHRO.
"CD SYNC" appears and the CD player and tape deck enter recording pause mode. The direction indicator in the REC EDIT control panel (►) indicates the direction in which recording will start.

If you want to record on the reverse side only
Click ◄ so that ◄ appears.

10 Click ❚❚, in the REC EDIT control panel, to release recording pause. Recording starts.

To stop recording
Click ■ in the REC EDIT control panel.

To cancel the CD program play mode before starting to record (in step 10)
Click PROGRAM repeatedly to select "CONTINUE".
The program play mode cannot be cancelled during synchro recording.

To erase the program contents
1 Click ■ to stop playback.
2 Click RESET in the PROGRAM EDIT menu.

To go back to the previous menu
Click RETURN or press RETURN on the remote control.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Note
Adjusting the volume will not effect the recording level. But this will change the sound levels you hear through the speakers or headphones.

Recording From the Radio

You can record from the tuner onto a tape. Use TYPE I (normal) or TYPE II (CrO2) tapes for recording.

1 Press EJECT ⏏ on the right speaker and insert a blank tape into the tape deck, with the side you want to record facing forward.
Make sure the tabs on the cassette have not been removed.

2 Click FUNCTION in the main menu.

3 Click TUNER.

4 Tune in the radio station you want to record. See "Listening to the Radio" for details.

5 Click SUB.

6 Click REC EDIT.

7 Click ⇄ repeatedly to select how to record the tape.

To record	Click to display
One side of the tape	⇆
Both sides*	⇄ or ⇄

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

8 Click DOLBY NR to select "DOLBY NR: B" or "DOLBY NR: C" when you want to reduce tape hiss in low-level, high- frequency signals.

9 Click REC.
"REC" appears and the tape deck enters recording pause mode. The direction indicator in the REC EDIT control panel (►) indicates the direction in which recording will start.

If you want to record on the reverse side only
Click ◄ so that ◄ appears.

10 Click ❚❚, in the REC EDIT control panel, to release recording pause. Recording starts.
You can also start recording by clicking ► or ◄.

To stop recording
Click ■ in the REC EDIT control panel.

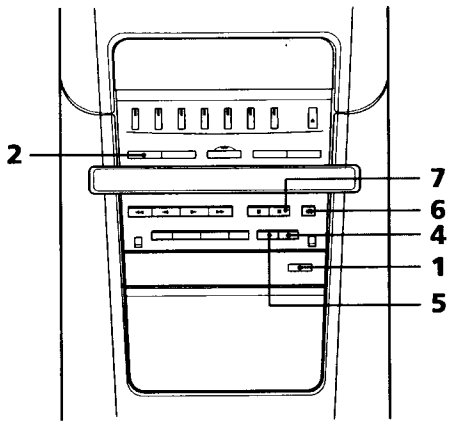
To insert a blank space
See "Inserting a Blank Space During Recording (rec mute)" on page 56.

To return to the previous menu
Click RETURN or press RETURN on the remote control.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Note
Adjusting the volume will not effect the recording level. But this will change the sound levels you hear through the speakers or headphones.

Recording from the radio using the controls on the speaker



1 Press EJECT ⏏ and insert a blank tape into the tape deck, with the side you want to record facing forward. Make sure the tabs on the cassette have not been removed.

2 Press FUNCTION repeatedly to select TUNER.

3 Tune in the radio station you want to record. See "Listening to the Radio" for details.

4 Press DIRECTION repeatedly to select how to record the tape.

To record	Select
One side of the tape	⇆
Both sides*	⇄ or ⇄

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

(continued)

5 Press DOLBY NR repeatedly to select DOLBY NR B or C when you want to reduce tape hiss in low-level, high- frequency signals.

6 Press REC.
The ● (REC) and ❚❚ (pause) indicators light up and the deck stands by for recording.
The direction indicators (◄ or ►) light to indicate which sides of the cassette you can use to record.
(For a full explanation of the ◄ and ► indicators, see "What the ◄ and ► indicators indicate" on page 50.)

If you want to record on the reverse side only
Press ◄ so the ◄ indicator lights steadily.

7 Press ❚❚, to release the record pause and start recording.

To stop recording
Press STOP ■.

To insert a blank space
See "Inserting a blank space during recording using the controls on the speaker" on page 57.

Note
Adjusting the volume will not effect the recording level. But this will change the sound levels you hear through the speakers or headphones.

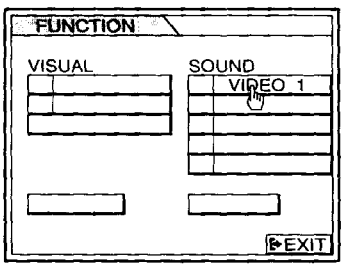
Recording From Other Components

You can record the audio signals from components connected to the VIDEO 1 and VIDEO 2 IN jacks onto a tape. Use TYPE I (normal) or TYPE II (CrO2) tapes for recording.

1 Press EJECT ⏏ on the right speaker and insert a blank tape into the tape deck, with the side you want to record facing forward.
Make sure the tabs on the cassette have not been removed.

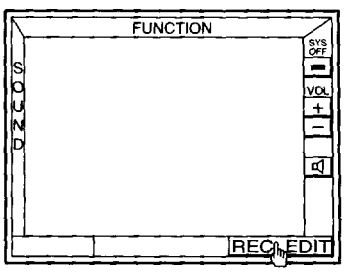
2 Click FUNCTION in the main menu.

3 Click VIDEO 1 or VIDEO 2 to select the component you want to record.

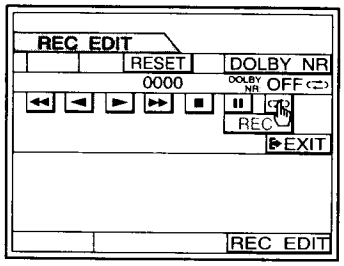


4 Prepare the source to play the program you desire. See the operating instructions supplied with the respective equipment for details.

5 Click REC EDIT.



6 Click ⇄ repeatedly to select how to record the tape.



To record	Click to display
One side of the tape	⇆
Both sides*	⇉ or ⇄

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

7 Click DOLBY NR to select "DOLBY NR: B" or "DOLBY NR: C" when you want to reduce tape hiss in low-level, high- frequency signals.

8 Click REC.
"REC" appears and the tape deck enters recording pause mode. The direction indicator in the REC EDIT control panel (►) indicates the direction in which recording will start.

If you want to record on the reverse side only
Click ◄ so that ◄ appears.

9 Click ❚❚, in the REC EDIT control panel, to release recording pause. Recording starts.
You can also start recording by clicking ► or ◄.

10 Start playing the program source. See the operating instructions supplied with the respective equipment for details.

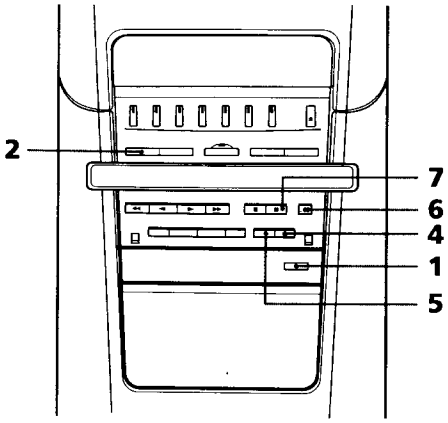
To stop recording
Click ■ in the REC EDIT control panel.

To insert a blank space
See "Inserting a Blank Space During Recording (rec mute)" on page 56.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Note
Adjusting the volume will not effect the recording level. But this will change the sound levels you hear through the speakers or headphones.

Recording from other components using the controls on the speaker



1 Press EJECT ⏏ and insert a blank tape into the tape deck, with the side you want to record facing forward. Make sure the tabs on the cassette have not been removed.

2 Press FUNCTION repeatedly to select VIDEO 1 or VIDEO 2.

3 Prepare the source to play the program you desire. See the operating instructions supplied with the respective equipment for details.

4 Press DIRECTION repeatedly to select how to record the tape.

To record	Select
One side of the tape	⇆
Both sides*	⇉ or ⇄

* Recording always stops at the end of the reverse side. Be sure to start from the front side.

5 Press DOLBY NR repeatedly to select DOLBY NR B or C when you want to reduce tape hiss in low-level, high- frequency signals.

(continued)

6 Press REC.
The ● (REC) and ❚❚ (pause) indicators light up and the deck stands by for recording.
The direction indicators (◄ or ►) light to indicate which sides of the cassette you can use to record.
(For a full explanation of the ◄ and ► indicators, see "What the ◄ and ► indicators indicate" on page 50.)

If you want to record on the reverse side only
Press ◄ so the ◄ indicator lights steadily.

7 Press ❚❚, to release the record pause and start recording.

8 Start playing the program source. See the operating instructions supplied with the respective equipment for details.

To stop recording
Press STOP ■.

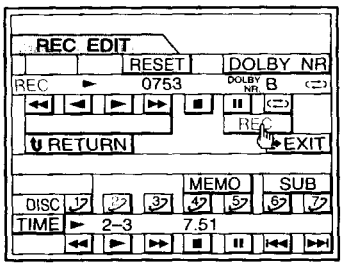
To insert a blank space
See "Inserting a blank space during recording using the controls on the speaker" on page 57.

Note
Adjusting the volume will not effect the recording level. But this will change the sound levels you hear through the speakers or headphones.

Inserting a Blank Space During Recording (rec mute)

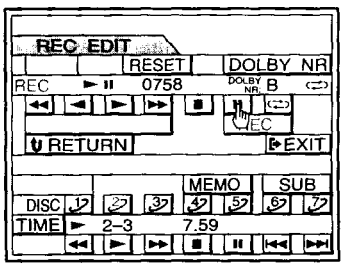
You can insert a blank space of four seconds between each track. The blank spaces between tracks let you locate the track easily with the AMS function (see pages 21 and 46). You can also use this function to eliminate any unwanted portions on the tape.

1 While recording, click REC at the position where you want to insert the blank space.



"REC" flashes and the tape runs without recording. After about four seconds, "REC", "►" and "❚❚" appear and the deck switches to recording pause mode.

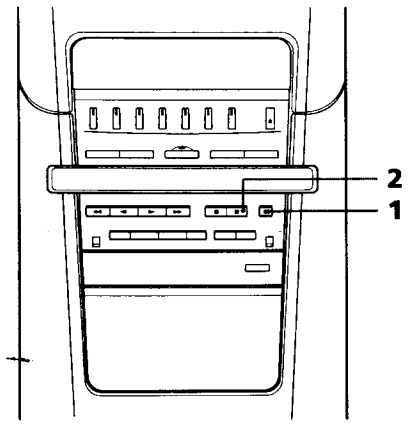
2 Click ❚❚ to resume recording.



To make a blank of more than four seconds
See the following section "Inserting a blank space during recording using the controls on the speaker".

To make a blank less than four seconds long.
Click ❚❚ while "REC" is flashing.

Inserting a blank space during recording using the controls on the speaker



1 While recording, press ● REC at the position where you want to insert the blank space. The "●" indicator flashes and the tape runs without recording. After about four seconds, the "●" and "❚❚" indicators light, and the deck switches to recording pause mode.

2 Press ❚❚ PAUSE to resume recording.

To make a blank of more than 4 seconds
Press ● REC for as long as needed.
The ● REC indicator flashes faster after four seconds have elapsed. The tape pauses when you release ● REC.

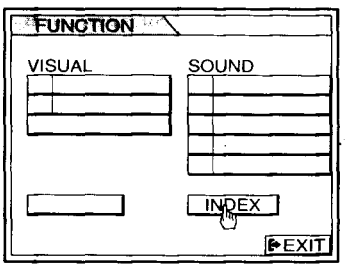
To make a blank less than four seconds long
Press ❚❚ PAUSE while the ● REC indicator is flashing.

Customizing the function menu

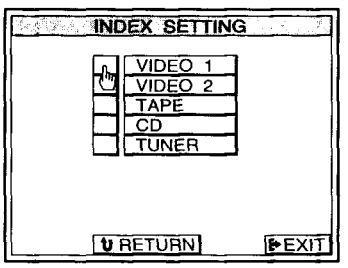
You customize the function menu by specifying icons and names up to 9 characters long for each function button.

1 Click FUNCTION in the main menu.

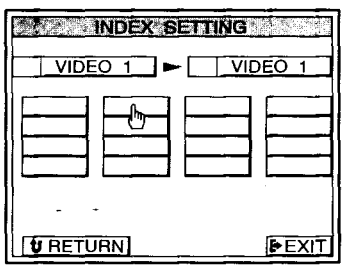
2 Click INDEX.
The INDEX SETTING screen appears.



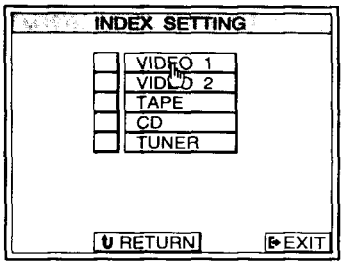
3 Click the icon to be changed.



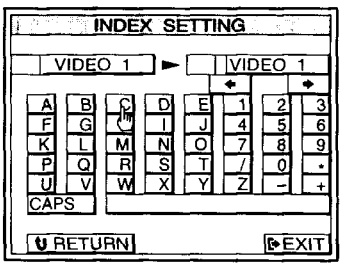
4 Click the icon you desire from the icon menu, then click RETURN.



5 Click the function button to be changed.



6 Spell out the new name by clicking each character in order. The name is stored automatically.



To enter a space
Click the space bar.

To switch between upper and lower case letters
Click CAPS.

If you make a mistake
Click ⬅ or ➡ to move the cursor to the character to be changed, then click the correct character (or click the space bar to erase the character).

To go back to the previous menu
Click RETURN or press RETURN on the remote control.

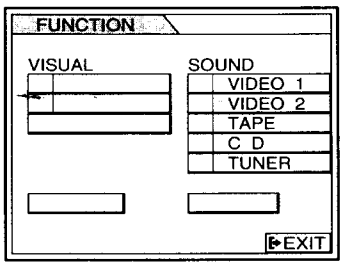
To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Enjoying Two Sources at the Same Time

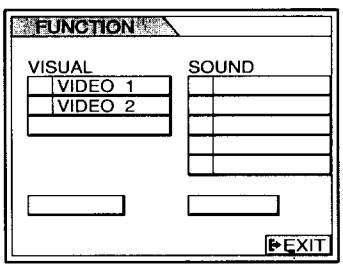
Use the procedure below to play two program sources at the same time (for example, to play a laser disc while listening to a compact disc).

1 Click FUNCTION in the main menu.
The FUNCTION SELECT menu appears.

2 Click the SOUND source you desire.



3 Click FUNCTION again, then click the VISUAL source you desire.



4 Start playing the SOUND source.

If you selected TAPE or CD
Click ► in the on screen control panel.

If you selected VIDEO 1 or 2
See the operating instructions supplied with the respective equipment for details.

5 Start playing the VISUAL program source.
See the operating instructions supplied with the respective equipment for details.

To stop playing the SOUND source
For TAPE or CD, Click ■ in the on screen control panel.
For VIDEO 1 or 2, see the operating instructions supplied with the respective equipment for details.

To stop playing the VISUAL source
See the operating instructions supplied with the respective equipment for details.

To deselect the video signal from the VISUAL source when listening a SOUND source

1 Click FUNCTION.
2 Click VISUAL OFF.
The video signal from the VISUAL source goes out. To turn off the VISUAL source, see the operating instructions supplied with the respective equipment.

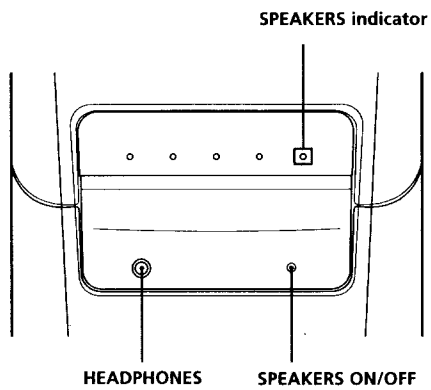
Listening With Headphones

You can connect a pair of headphones to the HEADPHONES jack on the left speaker.

1 Connecting the headphones to the HEADPHONES jack.

2 Press SPEAKERS ON/OFF to turn the speakers off.
The SPEAKERS indicator goes out.

3 Adjust the volume to the level you desire.



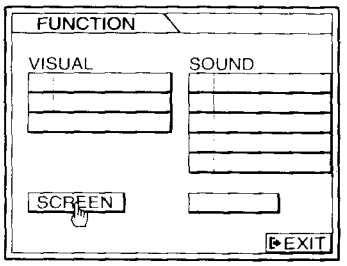
When you are finished listening with headphones
To avoid damaging the speakers, turn the volume down before turning the speakers back on.

Adjusting the Position of the On-Screen Display

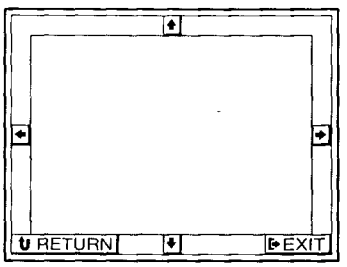
You can make fine adjustments to the overall position of the on-screen display control panel.

1 Click FUNCTION in the main menu.

2 Click SCREEN.



The position adjustment screen appears.



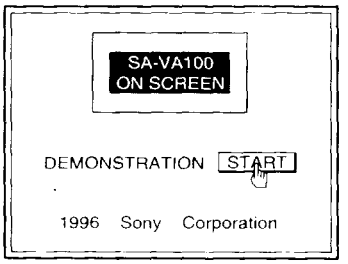
Click the ↑, →, ↓, or ← icons in the border to adjust the position so you can just see the top, bottom, right and left edges of the graphic.

To go back to the previous menu
Click RETURN or press RETURN on the remote control.

To exit to the main menu.
Click EXIT or press EXIT on the remote control.

Using the Demonstration Mode

When you first turn on the system a demonstration START icon appears in the display.



Clicking START activates a program that explains the various functions of the system.

To stop the program
Press one of the following buttons on the remote:

- ENTER
- ▲/▼/◀/▶
- RETURN
- EXIT
- OSD ON/OFF

When the demo is stopped, the main menu corresponding to the current system function is displayed. Pressing OSD ON/OFF, however, stops the demo and turns off the on-screen display.

Troubleshooting

If you run into any problem using this stereo system, use the following check list. And first check the following points:

- The power cord is connected firmly.
- The speakers are connected correctly and firmly.

Should any problem persist after you have made the checks below, consult your nearest Sony dealer.

Tuner

"TUNED" flashes in the display.

➡ Adjust the antenna.

"STEREO" flashes in the display.

➡ Adjust the antenna.

Severe hum or noise.

➡ Adjust the antenna.
➡ Move the AM loop antenna farther away from the TV and the speakers, or turn off the TV.
➡ The signal strength is too weak. Connect the external antenna.
➡ Connect the ground wire.

Tape Player

The tape does not record.

➡ No tape in the cassette holder.
➡ The tab has been removed from the cassette.
➡ The tape has reeled to the end.

The tape does not record or playback or there is a decrease in sound level.

➡ The heads are dirty. Clean them.*
➡ Magnetic deposits have built-up on the record/playback head.*

There is excessive wow or flutter, or the sound drops out.

➡ The capstans or pinch rollers are contaminated.*

The tape does not erase completely.

➡ Magnetic deposits have built-up on the record/playback head.*

Noise increases or the high frequencies are erased.

➡ Magnetic deposits have built-up on the record/playback head.*

*See "Maintenance."

CD Player

The disc tray does not close.

➡ The CD is not placed correctly.

The CD will not play.

➡ The CD is dirty.
➡ The CD is inserted label side down.
➡ The player is in pause mode.
➡ Moisture condensation has built up.
Leave the system turned on for about an hour until the moisture evaporates.

"NO DISC" is displayed.

➡ There is no CD in the player.

Play does not start from the first track.

➡ The player is in program or shuffle mode. Press PLAY MODE so that "PROGRAM" or "SHUFFLE" goes out.

"OVER" is displayed.

➡ ▶▶ was held down at the end of the CD. Press ◀◀ on the speaker or I◀◀ on the remote (or click I◀◀ in the on-screen display) to return to the normal display.

The CD player does not respond to any operations

➡ Turn off the power, unplug the right speaker's power cord from the wall outlet, then plug it back in.
Turn the power back on.

General

There's no sound from any of the speakers.

➡ Check that components are connected securely to the speakers.
➡ Make sure the SPEAKERS ON/OFF button is set to "ON" (and that the SPEAKERS indicator is lit).
➡ Click [icon] to cancel the muting function.
➡ Press MASTER VOLUME + to turn up the volume.

No sound or only a very low sound level is heard from the rear speakers.

➡ Surround sound is turned off.
➡ Adjust the volume of the rear speakers (see page 29).
➡ Check the sound image balance with TEST TONE (see page 27).

There's no sound from the center speaker.

➡ Make sure you selected the DOLBY SUR (or PRO LOGIC) surround mode.
➡ Adjust the center speaker level (see page 29).
➡ No center speaker is connected, but the CENTER SPEAKER button on the rear panel is set to EXTERNAL.

➡ You connected an external center speaker, but the Dolby Pro Logic Surround center mode is set to PHANTOM.
➡ You connected an external center speaker, but the CENTER SPEAKER button on the rear panel is set to INTERNAL.

Severe hum or noise is heard.

➡ Move the connecting cord away from any transformers or motors and least 3 meters (10 feet) from any fluorescent lights.
➡ Connect the speakers to your VCR or cable box instead of to your TV (see pages 11 and 12).

Remote operations cannot be performed.

➡ Point the remote towards the remote sensor on the left front speaker.
➡ Remove any obstructions between the remote and this system's left front speaker.
➡ Replace the batteries in the remote.

Restoring the Factory Settings

If you cannot solve the problems after you have made the checks above, do the following operation. (A micro-computer controls all of this system operations. Some troubles may occur because of electrical noises from the AC power.)

1 Turn POWER off.
2 Turn the power back on while holding down the DOLBY NR, STOP ■, and DISC 7 buttons on the right front speaker at the same time.

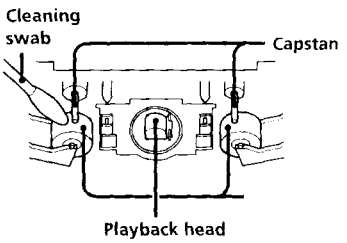
The micro-computer is reset and the radio station presets and tuner index are restored to the factory settings. Redo the settings according to your needs.

Maintenance

To clean the tape heads and tape path

Contaminated tape heads cause poor recording or sound drop-out in playback. We recommend cleaning after every 10 hours of operation.

Open the tape compartment and wipe the heads, the pinch rollers and the capstans with a cleaning swab slightly moistened with cleaning fluid or alcohol. Wipe the parts shown below:



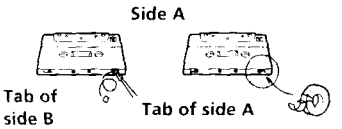
Insert a tape when the areas cleaned are completely dry.

To demagnetize the tape heads

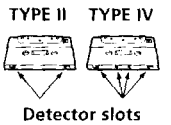
After 20 to 30 hours of use, enough residual magnetism will have built up on the heads to begin to cause loss of high frequencies and hiss. At this time, demagnetize the heads and all metal parts in the tape path with a commercially available tape head demagnetizer. Refer to the instructions of the demagnetizer.

To save a tape permanently

To prevent a tape from being accidentally recorded over, break off the cassette tab from side A or B as illustrated. If you later want to reuse the tape for recording, cover the broken tab with adhesive tape.



When you are using a TYPE II (CrO2) or TYPE IV (metal) cassette, be careful not to cover the detector slots which allow the tape player to automatically detect the type of tape.



To clean the cabinet

Use a soft cloth slightly moistened with mild detergent solution.

To clean the CD

When a CD is dirty, clean it with a cleaning cloth. Wipe the CD from the center out.

Notes on CD

- Do not use solvents such as benzene, thinner, commercially available cleaners, or antistatic spray intended for vinyl LPs.
- If there is a scratch, dirt or fingerprints on the CD, these may cause a tracking error.

Specifications

Audio Power Specifications

For center and front full range speakers: With 8 ohm loads both channels driven, from 70 – 20,000 Hz; rated 23 watts per channel minimum RMS power, with no more than 0.9% total harmonic distortion from 250 milliwatts to rated output

CD player section

System
Compact disc digital audio system
Laser
Semiconductor laser (λ = 780 nm)
Emission duration: continuous
Laser output
Max 44.6 μW *
* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Wavelength
780 - 790 nm
Harmonic Distortion
Less than 0.1%
Frequency response
2 Hz - 20 kHz ±1 dB
Signal-to-noise ratio
More than 90 dB
Dynamic range
More than 90 dB

Tuner section

FM stereo, FM/AM superheterodyne tuner
FM tuner section
Tuning range
87.5 – 108.0 MHz (100 kHz step)
Intermediate frequency
10.7 MHz
Antenna
FM lead antenna
Antenna terminals
75 ohm unbalanced
AM tuner section
Tuning range
530 - 1,710 kHz (with the interval set at 10 kHz)
531 - 1,710 kHz (with the interval set at 9 kHz)
Intermediate frequency
450 kHz
Antenna
AM loop antenna, External antenna terminals

Amplifier section

Continuous RMS power output
Total 160 W
Center tweeter
34 W (8 ohms at 10 kHz, 9 % THD)
Front full range
29 W + 29 W (8 ohms at 1 kHz, 9 % THD)
Super Woofer
34 W (8 ohms at 40 kHz, 9 % THD)
Rear
34 W (8 ohms at 1 kHz, 9 % THD)
Input sensitivity/impedance
VIDEO 1 and 2 : 245 mV, 47 kilohm
Output sensitivity/impedance
VIDEO 1 and 2 : 245 mV, 1 kilohm
External Center : 34 W (at 8 ohms, 1 kHz, 9 % THD), 8 – 16 ohms
Rear : Accepts only supplied rear speakers SS-SR151 17 W + 17 W (at 16 ohms, 1 kHz, 9% THD)
LINE IN: Accepts only SA-VA100 R-ch speaker
LINE OUT: Accepts only SA-VA100 L-ch speaker
Video Input/Output
VIDEO 1 and 2, MONITOR :
1 Vp-p, 75 ohms unbalanced, sync negative

Tape player section

Recording system
4-track 2-channel stereo
Frequency response (DOLBY NR OFF)
40 – 13,000 Hz (±3 dB), using Sony TYPE I cassette
40 – 14,000 Hz (±3 dB), using Sony TYPE II cassette
Wow and flutter
0.12% W. RMS (NAB)

Speaker Section

Type
Front speaker
Bass reflex type
DBR super woofer
SAW type
Rear speaker
Bass reflex type
Speaker units
Front speaker system
Center tweeter: 5 cm cone type (x2)
Front full range/Center tweeter: 10 cm cone type (x2)
Super woofer: 16 cm cone type (x2)
Rear Speakers
8 cm cone type (x2)

General

Power requirements
120 V AC, 60 Hz
Power consumption
Left : 110 W
Right : 35 W
Dimensions
Front: Approx. 280 x 1100 x 450 mm (w/h/d, including speaker base) ($11^{1}/_{8}$ x $43^{3}/_{8}$ x $17^{3}/_{4}$ inches)
Rear: Approx. 110 x 160 x 145 mm (w/h/d) ($4^{3}/_{8}$ x $6^{3}/_{8}$ x $5^{3}/_{4}$ inches)
Mass
Front (L): 22 kg (48 lb 8 oz)
Front (R): 23 kg (50 lb 11 oz)
Rear: 700 g/pc (1 lb 9 oz)

Supplied accessories

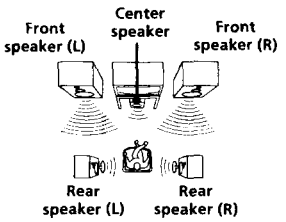
Front L/R speaker connecting cord, 3.5 m (1)
Audio cord, 3 m (1)
Video cord, 2 m (1)
Rear speaker SS-SR151 (2)
Rear speaker connecting cord, 10 m (2)
FM lead antenna (1)
AM loop antenna (1)
Remote commander (remote) RM-U100AV (1)
Sony SUM-3 (NS) batteries (2)
Speaker stand (2)
Screw (12)

Design and specifications are subject to change without notice.

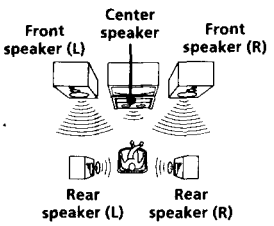
Glossary

Center mode
Setting of speakers to enhance Dolby Pro Logic Surround mode. To obtain the best possible surround sound, select one of the following four center modes according to your speaker system.

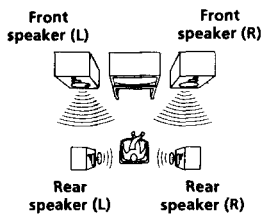
- **NORMAL mode**
  Select NORMAL mode if you have front and rear speakers and a small center speaker. Since a small speaker cannot produce enough bass, the bass sound of the center channel is output from the front speakers.



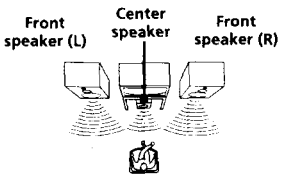
- **WIDE mode**
  Select WIDE mode if you have front and rear speakers and a large center speaker. With the WIDE mode, you can take full advantage of Dolby Pro Logic Surround sound.



- **PHANTOM mode**
  Select PHANTOM mode if you have front and rear speakers but no center speaker. The sound of the center channel is output from the front speakers.



- **3 CH LOGIC mode**
  Select 3 CH LOGIC mode if you have front and center speakers but no rear speaker. The sound of the rear channel is output from the front speakers to let you experience some of the surround sound without using rear speakers.



Delay time
Time lag between the surround sound output from front speakers and rear speakers. By adjusting the delay time of the rear speakers, you can obtain the feeling of presence. Make the delay time longer when you have placed the rear speakers in a small room or close to your listening position, and make it shorter when you have placed them in a large room or apart from your listening position.

Dolby Pro Logic Surround
Decoding system of Dolby Surround sound standardized in TV programs and movies. Compared with the former Dolby Surround system, Dolby Pro Logic Surround improves sound image by using four separate channels: off-screen audio effects, on-screen dialog, left-to-right panning, and music. These channels manipulate the sound to be heard and enhance the action as it happens on the screen. To take advantage of Dolby Pro Logic, you should have at least one pair of rear speakers and / or one center speaker. You also need to select the appropriate center mode to enjoy a full effect.

Dolby Surround
Encoding and decoding system of Dolby Surround sound for consumer use. Dolby Surround decodes the extra channels on the Dolby Surround-encoded sound tracks of movie videos and TV programs and produces sound effects and echoes that make the action seem to envelop you.

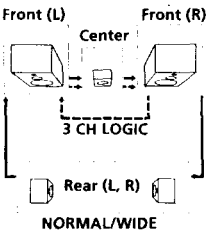
The system offers Dolby Surround (PRO LOGIC) as one of the pre-programmed sound fields. If you have rear or center speaker(s), we recommend that you customize the Dolby Surround sound field by selecting the appropriate center mode to take advantage of Dolby Pro Logic Surround sound.

Preset station
A radio broadcasting station that is stored in memory of the tuner. Once you "preset" stations, you no longer have to tune in the stations. Each preset station is assigned its own preset number, which lets you tune them in quickly.

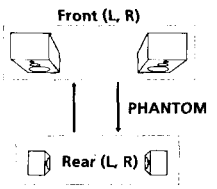
Sound field
Sound pattern produced by a sounding source or sources in a given environment due to direct and reflected sounds and the acoustics of the environment. The system offers pre-programmed sound fields like, PRO LOGIC, THEATER, and HALL (etc.) to let you enjoy surround sound easily.

Test tone
Signal given out by the system for adjusting the speaker volume. The test tone will come out as follows:

- **In a system with a center speaker (NORMAL/WIDE/3 CH LOGIC modes)**
  The test tone is output from the front L (left), center, front R (right), and rear speakers in succession.



- **In a system without a center speaker (PHANTOM mode)**
  The test tone is output from the front and the rear speakers alternately.



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